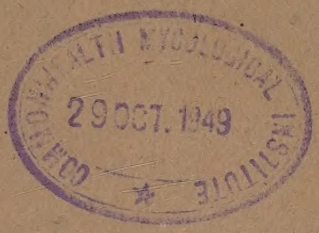
British West Indies Central Sugar Cane Breeding Station, Barbados



FIFTEENTH
ANNUAL REPORT

Ending September 30, 1948.

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I. FOREWORD

ADVISORY COMMITTEE

The fifteenth meeting of the Advisory Committee was held at Barbados from the 19th to the 22nd of November, 1948, and the Proceedings of the Committee which have been circulated are appended to this Report.

At this meeting, the position regarding the export of varieties to foreign countries was again discussed, and it was decided that planting material of Barbados varieties could be released to foreign countries outside the Caribbean area provided the request was made through the Chairman of the Advisory Committee, and that the varieties had been reaped as first year seedlings at least 10 years previously. It was decided that there should be no alterations to the present rulings with regard to countries within the Caribbean area.

The Committee was informed that the Secretary of State had made a Colonial Development and Welfare Research grant in favour of the Government of Barbados to provide for a programme of cyto-genetical research on sugar cane in the West Indies. The Cyto-Genetist would be appointed to the staff of the Station for a period of five years.

S. J. SAINT,

Director of Agriculture,

Chairman of Advisory Committee.

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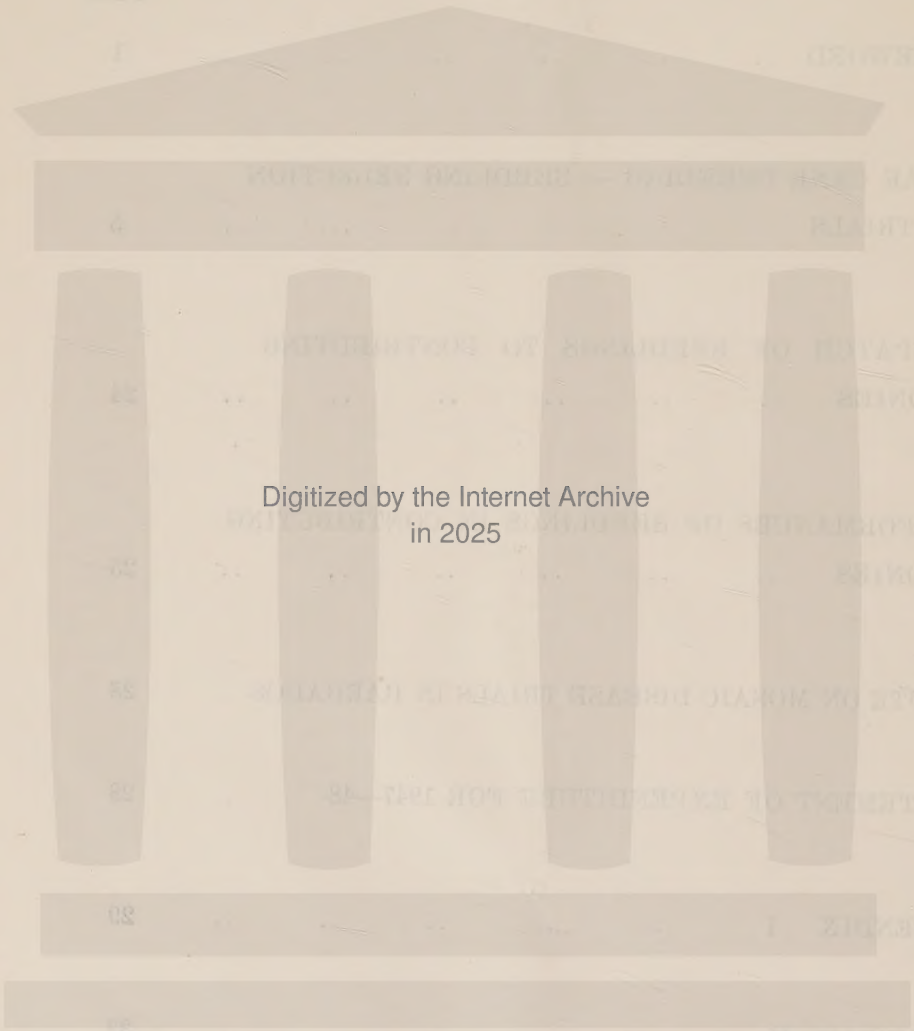

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British West Indies Central Sugar Cane Breeding Station, Barbados

FIFTEENTH ANNUAL REPORT FOR THE YEAR ENDING THE 30TH OF SEPTEMBER, 1948

II. SUGAR CANE BREEDING—SEEDLING SELECTION AND TRIALS

(i) SUGAR CANE BREEDING—B.s.49′ AND B.50′ SERIES

The usual methods were employed in the controlled crossing of various sugar cane varieties at Groves Agricultural Station from October, 1947 to January, 1948. The season was exceptionally dry, and generally speaking, arrowing was light, irregular and late. Only 81 crosses were obtained, and one of these was an open cross of B.37161 x B.4098. B.37161 did not flower in our breeding plots, and so very few crosses were obtained with this excellent parent. The open cross B.37161 x B.4098 was possible for two reasons. First, B.37161 occupies about 90 per cent of the Island's crop and secondly, B.37161 is itself a female parent and so does not shed any pollen. B.4098 on the other hand sheds pollen freely, so that it was possible to collect B.37161 arrows from a field of that variety situated immediately to the leeward of an isolated field of B.4098, and be sure that the seedlings would be of the intended cross.

(ii) SEEDLING RAISING, POTTING AND PLANTING IN THE FIELD NURSERY—B.s.47′ AND B.48′ SERIES

A fairly high percentage of the crosses had viable seed, particularly those obtained early in the season. However, the number of seedlings obtained per cross was disappointingly low. Advantage has been taken of these circumstances to introduce a very large number of seedlings of the outstanding cross B.37161 x B.4098 into the B.s.49′ and B.50′ Series First Year Seedling Trials.

Table I gives under group heads a list of the crosses made, the numbers of seedlings germinated, potted and planted in the Field Nursery and B.s.49′ Series First Year Seedling Trial, while Appendix I gives details of all crosses made.

TABLE I

Numbers of Seedlings in each Group Germinated, Potted and Planted in the Field Nursery and B.s.49' Series—First Year Seedling Trial

Group	No. of crosses	No. of seedlings germinated	No. potted	No. planted in Field Nursery	No. planted in B.s. 49' Series First Year Trial
S. officinarum x S. spontaneum					
local nobilisations	2	504	500	345	99
Noble x Glagah x Celebes ..	1	300	300	219	—
S. officinarum x S. barberi					
4th Nobilisation Chunnee ..	1	300	300	238	—
S. officinarum x S. barberi x S. spontaneum					
Noble x Chunnee x Local ..	16	14,333	9,227	7,724	800
Noble x Chunnee x Local x Celebes	5	11,420	5,240	3,768	1,213
Noble x Chunnee x Glagah ..	5	416	412	367	—
Noble x Chunnee x Glagah x Celebes	5	4,738	1.533	1,106	119
Noble x Chunnee x Glagah x Local	20	6,115	4,615	3,517	287
Noble x Chunnee x Glagah x Local x Celebes	4	2,790	2,790	1,711	396
S. officinarum x S. sinense					
2nd Nobilisation Sinense ..	1	—	—	—	—
S. officinarum x S. spontaneum x S. sinense					
Noble x Glagah x Sinense ..	2	170	170	165	—
Noble x Glagah x Celebes Sinense ..	1	350	350	337	—
S. officinarum x S. barberi x S. spontaneum x S. sinense					
Noble x Chunnee x Local x Sinense ..	1	80	80	77	—
Noble x Chunnee x Glagah x Sinense ..	2	300	300	250	—
Noble x Chunnee x Glagah x Local x Celebes x Sinense ..	1	—	—	—	—
Glagah x Chunnee x Local x Sinense ..	5	894	885	717	—
S. officinarum x S. spontaneum x S. robustum					
Noble x Glagah x Robustum ..	2	8,000	500	435	—
S. officinarum x S. barberi x S. robustum					
Noble x Chunnee x Robustum	2	140	140	120	—
S. officinarum x S. barberi x S. spontaneum x S. robustum					
Noble x Chunnee x Local x Robustum ..	2	3,465	565	538	—
Noble x Chunnee x Glagah x Local x Robustum ..	3	150	150	132	—
Grand Totals	81	54,465	28,057	21,766	2,914

(iii) PLANTING THE FIRST YEAR SEEDLING TRIAL—B.49′ SERIES

This series was bred in 1946, potted and planted in the Field Nursery in 1947, and from this, into the First Year Seedling Trial in November, 1947. This Trial is usually planted at the end of October, but owing to excessively dry weather conditions, planting had to be postponed until the end of November, and the field was then irrigated in an effort to secure a good germination. For the first time, canes which were considered to be too thin for commercial purposes were discarded at this stage, except in the case of those crosses where material for further breeding only was sought. This procedure greatly reduces the numbers planted in the First Year Seedling Trial and will no doubt result in a great saving of time and labour during the crop season. The number of crosses and seedlings in each group are given in Appendix II. A summary of this Appendix is given in Table II.

TABLE II

Numbers of crosses and seedlings in each group planted in the First Year Seedling Trial, November, 1947—B.49′ Series

Group.	No. of Crosses	No. of seedlings planted in trial
S. officinarum x S. spontaneum		
3rd Nobilisation Local	1	67
Glagah Nobilisations	2	94
2nd Nobilisation Dacca	1	80
Noble x Glagah x Local	1	120
Noble x Glagah x Celebes	1	141
Noble x Glagah x Local x Celebes	2	245
S. officinarum x S. spontaneum x S. barberi		
Noble x Local x Chunnee	10	1,448
Noble x Glagah x Chunnee	8	818
Noble x Glagah x Local x Chunnee	19	2,100
Noble x Glagah x Celebes x Chunnee	10	776
Noble x Local x Celebes x Chunnee	9	1,300
S. officinarum x S. spontaneum x S. robustum		
Noble x Glagah x Robustum	1	50
S. officinarum x S. barberi x S. robustum		
Noble x Chunnee x Robustum	1	9
S. officinarum x S. spontaneum x S. barberi x S. robustum		
Noble x Glagah x Chunnee x Robustum	2	34
Noble x Local x Chunnee x Robustum	7	495
Noble x Glagah x Local x Chunnee x Robustum	2	115
S. officinarum x S. spontaneum x S. barberi x S. sinense		
Noble x Local x Chunnee x Sinense	1	56
Noble x Glagah x Local x Chunnee x Sinense	8	457
Noble x Glagah x Celebes x Chunnee x Sinense	2	40
Noble x Local x Celebes x Chunnee x Sinense	1	20
S. officinarum x S. spontaneum x S. barberi x S. robustum x S. sinense		
Noble x Local x Chunnee x Robustum x Sinense	1	10
Grand Totals	90	8,505

(iv) RESULTS OF REAPING THE FIRST YEAR SEEDLING TRIALS—B.s.48′ AND B.48′ SERIES

These series of seedlings were bred in 1945 and 1946 respectively. The B.48′ Series was planted in the Field Nursery in May, 1946 and from this into the First Year Seedling Trial in November and December, 1946, while the B.s.48′ Series was planted from pots into a First Year Seedling Trial in May, 1947.

As in previous years, the seedlings were cut, bundled and laid out for inspection. Selection was made more difficult by the very dry conditions experienced during the growth of the crop, and also by the fact that many of the seedlings died from the severe drought.

Sixty-three selections were made in the B.s.48′ Series and three hundred and thirty-six in the B.48′ Series, making a total of three hundred and ninety-nine selections altogether. Table III gives details of the field and final selections made from each cross.

TABLE III.

First Year Seedlings—B.s.48′ and B.48′ Series. Field and Final Selections

Cross	No. of seedlings reaped	No. selected in field	% field selection	No. final selection	% final selection
B.s.48' Series					
B.3439 x B.(30) L7 ..	80	—	—	—	—
B.3439 x B.37175 ..	100	1	1	1	1
„ x Co.290 ..	100	6	6	5	5
B.34102 x B.37193 ..	199	—	—	—	—
„ x B.4098 ..	190	6	3	4	2
B.35197 x B.34104 ..	90	8	9	5	6
B.35207 x B.34104 ..	190	4	2	2	1
B.35247 x B.34104 ..	290	6	2	6	2
„ x B.38279 ..	140	4	3	2	1
„ x B.4306 ..	98	4	4	3	3
B.37161 x P.O.J.2878 ..	100	5	5	5	5
B.37227 x B.4098 ..	90	5	6	2	2
B.38233 x B.34104 ..	500	18	4	9	2
B.39207 x B.41211 ..	160	7	4	6	4
B.40105 x B.37193 ..	180	6	3	5	3
B.40272 x B.4098 ..	100	4	4	3	3
„ x Co.419 ..	90	1	1	1	1
B.43283 x B.41227 ..	90	2	2	2	2
B.4455 x B.4098 ..	70	3	4	1	1
Co.421 x B.45301 ..	100	1	1	1	1
B.48' Series					
B.3354 x B.4098 ..	200	2	1	2	1
B.3365 x B.39220 ..	80	2	3	1	1
„ x B.39268 ..	90	4	4	4	4
„ x B.40123 ..	35	1	3	1	3
„ x B.40271 ..	35	1	3	1	3
„ x B.4146 ..	100	1	1	1	1
„ x B.41242 ..	100	2	2	1	1
„ x B.41255 ..	100	4	4	4	4
B.3439 x B.3337 ..	250	19	8	18	17
„ x B.39274 ..	100	—	—	—	—
„ x B.4453 ..	90	6	7	2	2
„ x B.44227 ..	80	3	4	2	2
„ x Co.290 ..	20	3	15	3	15
„ x Co.419 ..	100	13	13	12	12
„ x C.P.36-116 ..	100	6	6	5	5
„ x Dacca ..	40	4	10	2	5

TABLE III.—*Cont'd.*

Cross	No. of seedlings reaped	No. selected in field	% field selection	No. final selection	% final selection
B.34102 x B.3337 ..	100	3	3	3	3
„ x 28 N.G.7 ..	20	1	5	1	5
B.34117 x B.35269 ..	26	—	—	—	—
B.35197 x B.34104 ..	600	28	5	27	5
„ x B.37193 ..	200	16	8	9	5
„ x B.38192 ..	100	—	—	—	—
„ x B.4098 ..	100	—	—	—	—
„ x B.40256 ..	100	1	1	1	1
„ x B.41211 ..	200	15	8	10	5
„ x B.41226 ..	100	—	—	—	—
„ x B.42231 ..	100	6	6	4	4
B.35206 x B.34104 ..	250	2	1	1	—
„ x B.4098 ..	100	6	6	6	6
B.35207 x B.35269 ..	41	—	—	—	—
„ x B.40270 ..	10	—	—	—	—
„ x B.4098 ..	100	4	4	3	3
B.35218 x B.39250 ..	100	5	5	1	1
„ x B.4098 ..	400	9	2	6	2
„ x B.41242 ..	100	9	9	9	9
„ x B.41255 ..	100	2	2	2	2
„ x B.41276 ..	100	3	3	3	3
„ x B.44236 ..	100	8	8	5	5
B.35247 x B.3337 ..	450	25	6	16	4
„ x B.37224 ..	53	—	—	—	—
„ x B.37261 ..	95	1	1	1	1
„ x B.39220 ..	100	1	1	1	1
„ x B.41211 ..	100	—	—	—	—
„ x B.41227 ..	200	13	7	8	4
„ x B.4226 ..	100	1	1	1	1
„ x B.42114 ..	100	2	2	1	1
B.37161 x B.41211 ..	185	9	5	6	3
„ x Co.419 ..	30	2	7	2	7
B.37162 x B.41228 ..	100	—	—	—	—
B.37227 x B.4098 ..	100	—	—	—	—
B.37266 x B.4098 ..	100	1	1	1	1
B.38203 x B.41211 ..	150	11	7	9	6
B.38233 x B.34104 ..	550	17	3	16	3
B.38260 x B.H.10(12) ..	70	—	—	—	—
B.38272 x B.34104 ..	100	6	6	3	3
„ x B.37193 ..	100	5	5	1	1
„ x B.4098 ..	100	7	7	1	1
B.39157 x B.4098 ..	200	3	2	3	2
B.39177 x B.37193 ..	150	6	4	5	3
B.39223 x B.41211 ..	100	2	2	2	2
B.39253 x B.4098 ..	100	2	2	1	1
B.4092 x B.37193 ..	58	2	4	2	4
B.4096 x B.(30)L7 ..	100	2	2	2	2
B.4097 x Co.419 ..	33	2	6	1	3
B.40157 x B.41211 ..	80	3	4	3	4
B.40272 x Co.290 ..	80	4	5	4	5
„ x 32 M.Q.657 ..	60	—	—	—	—
„ x 28 N.G.251 ..	70	3	4	2	3
B.4145 x B.34104 ..	100	6	6	6	6
„ x B.37193 ..	200	12	6	8	4
„ x B.4098 ..	150	16	11	13	9

TABLE III.—*Concluded*

Cross	No. of Seedlings reaped	No. selected in field	% field selection	No. final selection	% final selection
B.4214 x B.41203 ..	100	11	11	9	9
B.42279 x B.41276 ..	100	7	7	7	7
B.42304 x B.37193 ..	100	6	6	6	6
B.4455 x B.H.10(12) ..	100	3	3	3	3
B.4457 x B.4098 ..	100	1	1	1	1
B.44130 x B.603 ..	25	1	4	1	4
B.44233 x B.37193 ..	100	2	2	2	2
Co.421 x B.4098 ..	150	14	9	10	7
„ x B.41211 ..	250	25	10	19	8
„ x B.41261 ..	30	1	1	1	1
„ x B.4459 ..	100	4	4	2	2
„ x Co.290 ..	100	2	2	2	2
P.O.J.2878 x B.41211 ..	100	1	1	1	1
Ba.11569 x B.4405 ..	40	1	3	1	3
„ x B.44226 ..	100	3	3	1	1
M.D.47 x B.41211 ..	100	1	1	1	1
Totals	13,433	527		399	

As a result of this trial, it was decided not to repeat any of the following crosses, as the percentage number of seedlings selected from their progenies is not sufficiently large:—

B.3439 x B.39274	B.35247 x B.37224	B.38272 x B.37193
B.34117 x B.35269	„ x B.37261	„ x B.4098
B.35197 x B.38192	„ x B.41211	B.39253 x B.4098
„ x B.4098	„ x B.4226	Co.421 x B.41261
„ x B.40256	„ x B.42114	„ x Co.290
„ x B.41226	B.37162 x B.41228	P.O.J.2878 x B.41211
B.35207 x B.35269	B 37227 x B.4098	M.D.47 x B.41211
„ x B.40270	B.37266 x B.4098	
B.35218 x B.39250	B.38260 x B.H.10(12)	

(v) PROGRESS WITH SEEDLINGS OF THE B.s.47′ AND B.47′ SERIES

The four hundred and nineteen seedlings of the B.s.47′ and B.47′ Series were multiplied in ten cane hole plots at Codrington during 1947, and in October of that year, a further selection was made, when the number was reduced to 265. The selected seedlings were planted in the Central Sugar Cane Breeding Station Second Year Seedling Trials at the low rainfall station, Codrington (2 trials) and in duplicate trials at the high rainfall stations, Pool and Drax Hall. These trials will be reaped during the 1949 crop season.

(vi) PROGRESS WITH SEEDLINGS OF THE B.46′ SERIES

The seedlings were planted in the Central Sugar Cane Breeding Station Second Year Seedling Trials at the low rainfall station, Codrington (2 trials) and in duplicate trials at the high rainfall stations, Pool and Colleton in November, 1945. These trials were reaped as plant canes during the past season, when fifty-four seedlings were selected. One of these was selected for the breeding plots at Groves only, and the remainder for trial in Barbados and other contributing colonies. These seedlings will in future be sent direct to the colonies concerned and not to the Plant Quarantine Station. The performances of the selected seedlings and standard varieties are given in Tables IV and V.

TABLE IV

Central Sugar Cane Breeding Station Second Year Seedling Trials — B. 46' Series. Codrington and Pool

Performances of Standards and Selected Seedlings (Figures are the means of three plots)

Codrington .. Harvested — 16th to 18th February, 1948

Pool .. Harvested — 8th to 11th April, 1948

Seedling	Parentage.	Group	No. of Canes per plot (Rotten)		Percentage Arrowing		Z.H.R. Brix		Weight—Tons cane per acre	
			Codrington	Pool	Codrington	Pool	Codrington	Pool.	Codrington	Pool
B.37161	Standard.	I	95(7)	116(13)	—	23	20.7	22.6	26.75	21.53
B.4098	Standard.	„	117(11)	118(9)	—	1	22.2	23.3	26.66	18.23
B. 4604	B.3354 x B.3337	„	94(10)	122(9)	—	—	21.4	22.7	19.44	23.99
B. 4608	B.3354 x Co.290	„	100(11)	109(11)	10	13	21.6	21.9	23.39	20.55
B.37161	Standard.	II	100(2)	99(7)	—	15	21.9	22.6	26.40	21.84
B. 4098	Standard.	„	132(3)	124(6)	—	6	23.7	21.7	27.52	21.33
B. 4642	B.35197 x P.O.J.2878 ..	„	89(6)	81(5)	—	7	20.9	22.3	20.12	18.75
B. 4645	B.35206 x P.O.J.2878 ..	„	105(0)	114(8)	—	17	20.6	21.1	16.51	19.18
B. 4647	B.35206 x P.O.J.2878 ..	„	98(5)	113(5)	—	3	22.0	22.4	17.37	17.63
B.37161	Standard.	III	109(2)	88(6)	—	12	22.5	22.3	29.24	20.55
B 4098	Standard.	„	111(4)	113(10)	—	10	22.9	22.6	23.91	20.04
B. 4659	B.35218 x B.3337	„	103(3)	118(5)	—	8	22.7	22.7	22.36	22.19
B. 4668 .. .	B.35218 x B.37175 ..	„	84(8)	93(9)	2	8	22.2	22.5	16.25	19.69
B.37161	Standard.	IV	104(2)	99(6)	—	19	22.3	22.6	27.18	23.56
B. 4098	Standard.	„	125(5)	137(5)	—	14	24.2	23.0	27.95	27.09
B. 4681	B.35218 x P.O.J.2878 ..	„	100(8)	127(9)	—	5	22.4	23.6	20.64	25.80
B. 4682	B.35218 x P.O.J.2878 ..	„	99(5)	98(4)	—	13	22.3	22.1	17.11	19.69
B. 4688	B.35247 x B.3337	„	116(2)	110(6)	—	4	21.4	20.8	21.93	22.88
B. 4691	B.35247 x B.3337	„	102(3)	118(9)	—	—	21.4	21.3	22.53	29.76
B. 4692	B.35247 x B.34104 ..	„	135(2)	114(2)	1	9	21.6	22.9	25.54	26.06
B. 4699	B.37161 x B.34104 ..	„	106(1)	114(4)	—	12	22.9	22.6	17.72	20.21
B.46102	B.37161 x B.34104.. ..	„	98(1)	106(4)	—	3	22.0	22.5	23.56	26.57
B 46103	B.37161 x B.34104.. ..	„	82(4)	86(6)	—	—	21.3	22.2	23.82	21.24
B.37161	Standard.	V	97(7)	138(8)	—	9	20.6	22.8	28.29	20.45
B.4098	Standard.	„	122(7)	119(24)	—	5	21.9	22.5	29.37	19.61
B.46105	B.37161 x B.35187 ..	„	137(0)	149(13)	4	10	16.5	19.7	24.60	23.99
B.46113	B.37161 x B.40256 ..	„	89(10)	92(11)	1	3	21.8	22.8	21.24	17.63
B.46116	B.37161 x P.O.J.2878 ..	„	122(6)	113(9)	—	4	21.0	22.9	21.76	18.40
B.37161	Standard.	VI	116(1)	102(7)	—	16	21.8	23.3	26.06	20.12
B. 4098	Standard.	„	128(3)	105(6)	—	6	22.0	23.2	24.68	21.50
B.46136	B.37161 x P.O.J.2878 ..	„	97(6)	105(6)	—	5	22.2	22.9	21.67	22.19
B.46144	B.38212 x B.34104.. ..	„	106(4)	124(7)	—	11	22.6	23.0	18.75	20.64
B.46149	B.4094 x B.3337	„	91(3)	110(4)	—	4	23.0	24.1	15.05	18.65
B.46150	B.4094 x B.3337	„	141(8)	150(10)	—	5	22.1	23.2	20.98	22.19
B.46151	B.4096 x B.35187	„	93(7)	91(5)	—	9	22.2	24.6	20.73	17.97
B.37161	Standard.	VII	118(7)	103(8)	—	17	21.6	23.0	29.24	19.35
B. 4098	Standard.	„	138(5)	119(5)	—	6	23.4	22.5	28.55	20.30
B.46190	B.3439 x B.37175	„	80(3)	97(4)	—	8	23.1	23.2	19.69	19.26
B.46199	B.3439 x Pasoeroean ..	„	143(2)	135(5)	—	19	23.2	23.2	22.10	20.98
B.37161	Standard.	VIII	110(5)	102(1)	—	17	22.6	23.2	25.80	24.60
B. 4098	Standard.	„	139(4)	119(9)	—	5	23.4	23.5	26.75	23.13
B.46204	B.3439 x P.O.J.2714 ..	„	119(6)	114(7)	—	4	22.8	23.0	20.90	21.59
B.46218	B.34102 x B.3337	„	112(3)	109(10)	—	—	23.3	23.6	18.75	19.61
B.46223	B.34117 x P.O.J.2878 ..	„	74(10)	124(3)	—	—	21.0	24.0	12.13	25.46
B.46230	B.35197 x B.34104	„	80(0)	96(1)	—	9	22.6	23.4	15.57	20.21
B.46232	B.35197 x B.34104	„	140(1)	147(2)	—	5	22.3	22.2	22.45	28.04

TABLE V

Central Sugar Cane Breeding Station Second Year Seedling Trials — B. 46' Series. Codrington and Pool

Performances of Standards and Selected Seedlings (Figures are the means of three plots)
Codrington .. Harvested — 19th to 21st January, 1948
Colleton .. Harvested — 18th to 23rd March, 1948

Seedling	Parentage	Group	No. of Canes per Plot (Rotten)		Percentage Arrowing		Z.H.R. Brix		Weight—Tons Cane per Acre	
			Codrington	Colleton	Codrington	Colleton	Codrington	Colleton	Codrington	Colleton
B.37161 ..	Standard	IX	97(7)	129(4)	—	13	20.2	22.3	19.18	**31.56**
B.4098 ..	Standard	„	114(3)	142(4)	—	28	19.0	22.5	19.35	**33.54**
B.46248 ..	B.35218 x B.4098	„	96(15)	142(16)	—	2	19.9	23.6	11.35	**28.29**
B.37161 ..	Standard	X	89(10)	116(2)	—	29	20.5	22.0	21.16	**29.41**
B.4098 ..	Standard	„	127(7)	142(7)	—	25	20.6	22.8	24.42	**34.51**
B.46265 ..	B.35247 x B.34104 ..	„	134(4)	120(1)	—	61	20.3	22.0	22.70	**29.33**
B.46281 ..	B.37161 x B.34104 ..	„	92(10)	103(2)	—	3	20.1	22.4	15.05	**27.78**
B.46284 ..	B.37161 x B.34104 ..	„	125(5)	149(2)	—	7	21.3	23.3	21.07	**36.46**
B.37161 ..	Standard	XI	81(5)	107(5)	—	26	19.4	21.3	14.36	**28.64**
B.4098 ..	Standard	„	133(13)	146(5)	—	25	20.5	23.1	21.24	**34.14**
B.46288 ..	B.37161 x B.40256 ..	„	90(12)	102(8)	—	29	19.9	22.3	15.74	**30.60**
B.46289 ..	B.37161 x B.40256 ..	„	102(2)	130(6)	—	18	20.4	22.0	16.51	**24.94**
B.46290 ..	B.37161 x B.40256 ..	„	79(11)	123(8)	—	13	19.5	21.4	13.76	**27.18**
B.46293 ..	B.37161 x P.O.J.2878 ..	„	56(36)	93(5)	—	8	18.4	21.7	11.09	**26.66**
B.46295 ..	B.37161 x P.O.J.2878 ..	„	100(5)	120(8)	—	7	21.1	22.2	17.89	**26.74**
B.46297 ..	B.37161 x P.O.J.2878 ..	„	79(4)	97(9)	—	53	21.4	22.5	18.06	**29.07**
B.37161 ..	Standard	XII	86(8)	110(5)	—	21	19.9	22.3	17.97	**30.96**
B.4098 ..	Standard	„	138(3)	134(15)	—	15	21.4	21.7	21.84	**29.76**
B.46308 ..	B.37161 x P.O.J.2878 ..	„	100(5)	119(3)	—	6	19.9	23.1	18.58	**22.70**
B.46320 ..	B.40105 x B.37193 ..	„	137(4)	160(9)	—	—	18.7	20.7	15.74	**29.24**
B.46339 ..	B.34102 x B.34104 ..	„	113(6)	116(11)	—	3	20.4	24.1	14.92	**27.95**
B.37161 ..	Standard	XIII	100(1)	137(6)	—	20	20.7	22.2	23.13	**35.60**
B.4098 ..	Standard	„	133(4)	145(9)	—	20	22.4	22.6	24.25	**33.60**
B.46340 ..	B.34102 x B.34104 ..	„	92(5)	115(9)	—	33	23.2	23.8	16.00	**28.12**
B.46351 ..	B.35206 x P.O.J.2878 ..	„	117(3)	99(17)	—	11	22.4	22.1	21.59	**24.08**
B.37161 ..	Standard	XIV	95(2)	124(1)	—	28	20.7	22.5	19.78	**30.87**
B.4098 ..	Standard	„	130(2)	121(8)	—	11	20.4	23.5	19.78	**31.13**
B.46364 ..	B.35247 x B.3337 ..	„	99(3)	150(2)	—	7	20.7	23.0	16.43	**31.99**
B.46369 ..	B.35247 x B.3337 ..	„	105(2)	147(7)	—	6	19.4	20.5	17.29	**30.10**
B.46378 ..	B.37161 x B.34104 ..	„	107(1)	103(4)	—	28	22.5	23.8	19.18	**24.68**
B.37161 ..	Standard	XV	90(2)	121(7)	—	23	21.4	21.9	17.63	**31.22**
B.4098 ..	Standard	„	102(3)	142(16)	—	28	22.2	23.3	12.56	**35.69**
B.46384 ..	B.37161 x P.O.J.2878 ..	„	58(5)	123(17)	—	36	20.3	20.4	10.32	**30.07**
B.46391 ..	B.37161 x P.O.J.2878 ..	„	97(1)	110(3)	—	42	21.9	21.9	20.04	**27.00**
B.46394 ..	B.37161 x P.O.J.2878 ..	„	100(8)	133(6)	—	12	21.3	23.2	15.05	**31.22**
B.46397 ..	B.4096 x B.35187 ..	„	105(8)	129(5)	—	—	20.3	23.4	17.54	**34.23**
B.46399 ..	B.40105 x B.37193 ..	„	93(3)	103(8)	—	3	21.1	22.5	12.13	**25.37**

(vii) PROGRESS WITH SEEDLINGS OF THE B.45′ SERIES

These seedlings were reaped in the Central Sugar Cane Breeding Station Second Year Trials as plant canes in 1946, with the exception of the trial at Pool which was burnt and could not be reaped. All the seedlings in the latter trial were reaped as first ratoons, and these results were used in making selections. In the trial at Bowmanston only the plots of selected seedlings were reaped as ratoons.

At Pool twenty-five seedlings were selected, two of which are for the breeding plots only, while the remainder will be tried in Barbados and other contributing colonies. These seedlings will be sent to the contributing colonies together with those of the B.46′ Series.

The results of the trial at Bowmanston made it possible to eliminate 8 of the fifteen selections on their performance as ratoons. The performances of the selected seedlings and standard varieties are given in Tables VI and VII.

TABLE VI

Central Sugar Cane Breeding Station Second Year.
Seedling Trial — B.45′ Series

Pool — 1st Ratoons — Performances of Standards and Selected Seedlings
Harvested :—27th February and 1st March, 1948.

Seedling	Parentage	Group	No. of Canes per Plot (Rotten)	Percentage Arrowing	Z.H.R. Brix	Weight — Tons Cane per Acre
B.37161	Standard	I	123(3)	48	**23.3**	24.42
B. 4098	Standard	„	141(2)	5	**23.3**	22.62
B. 4502	B.3274 x B.34104	„	**142(2)**	15	**25.1**	**20.73**
B. 4503	„ x „	„	143(1)	5	**22.5**	20.30
B. 4504	„ x „	„	158(3)	4	**24.0**	26.06
B. 4506	„ x „	„	141(2)	8	**22.6**	23.22
B. 4514	B.3353 x B.34104	„	89(3)	11	**21.7**	16.60
B.37161	Standard	II	95(1)	13	**23.1**	17.03
B. 4098	Standard	„	109(1)	10	**22.8**	18.75
B. 4526	B.3354 x B.34104	„	109(0)	5	**22.4**	18.65
B. 4530	„ x „	„	104(3)	—	**21.3**	19.95
B. 4531	„ x „	„	133(1)	—	**24.1**	14.45
B. 4534	„ x „	„	131(2)	13	**21.9**	19.44
B. 4537	„ x „	„	118(1)	1	**21.8**	15.82
B. 4547	B.3365 x B.41242 .. .	„	100(4)	5	**22.5**	14.45
B.37161	Standard	III	121(5)	27	**23.0**	18.49
B. 4098	Standard	„	115(5)	—	**22.7**	13.67
B. 4553	B.3371 x B.34104	„	139(3)	—	**23.0**	16.94
B. 4556	„ x „	„	125(2)	—	**22.5**	17.72
B. 4558	B.3371 x B.37193	„	131(3)	8	**22.2**	18.15
B. 4572	B.3439 x B.(30) L.7	„	101(2)	—	**24.1**	14.53
B.37161	Standard	IV	112(8)	16	**23.1**	17.20
B. 4098	Standard	„	139(9)	10	**23.7**	17.72
B. 4581	B.3439 x B.39252	„	190(4)	7	**21.7**	22.96
B. 4596	B.35206 x B.34104	„	155(2)	4	**22.7**	18.06
B.37161	Standard	V	129(3)	41	**22.4**	22.36
B. 4098	Standard	„	141(6)	5	**24.2**	19.35
B.45137	B.38272 x B.34104	„	178(0)	9	**25.4**	**21.93**
B.45141	B.39157 x P.O.J.2878 ..	„	161(1)	4	**21.8**	19.09
B.37161	Standard	VI	91(4)	46	**22.7**	19.09
B. 4098	Standard	„	118(8)	10	**23.0**	20.12
B.45151	B.39254 x B.34104	„	187(13)	—	**23.7**	**26.66**
B.45152	„ x „	„	168(8)	6	**23.5**	**27.69**
B.45156	B.39254 x P.O.J.2878 ..	„	146(4)	20	**22.8**	21.84
B.45162	B.4092 x B.37193	„	**134(14)**	2	**22.7**	17.89

TABLE VII

Central Sugar Cane Breeding Station Second Year

Seedling Trial — B.45′ Series

Bowmanston — 1st Ratoons — Performances of Standards and Selected Seedlings

Harvested :— 31st March and 1st and 2nd April, 1948

Seedling	Parentage	Group	No. of Canes per Plot (Rotten)	Percentage Arrowing	Z.H.R. Brix	Weight Tons Cane per Acre
B.37161 ..	Standard	VIII	119(10)	15	21.6	28.98
B. 4098 ..	Standard	„	135(9)	9	22.7	29.67
B.45188 ..	B.3354 x B.34104 ..	„	143(5)	6	22.0	33.45
*B.45189 ..	„ x „	„	150(7)	12	23.1	25.54
*B.45200 ..	B.3371 x B.34104	„	123(7)	5	22.0	23.48
B.37161 ..	Standard	X	125(8)	20	21.0	29.50
B. 4098 ..	Standard	„	155(7)	19	23.0	30.87
B.45224 ..	B.3439 x 32 M.Q.579 ..	„	170(11)	21	22.4	28.55
*B.45229 ..	B.35206 x 32 M.Q.629 ..	„	93(16)	5	22.2	13.50
B.45237 ..	B.37161 x B.37256	„	212(8)	22	22.7	30.96
B.37161 ..	Standard	XI	114(6)	33	21.8	28.72
B. 4098 ..	Standard	„	130(7)	8	22.1	28.90
B.45267 ..	B.39254 x Co.290	„	173(18)	13	21.8	29.58
B.45270 ..	B.4092 x B.37193	„	125(5)	—	21.7	21.33
B.37161 ..	Standard	XII	110(3)	15	21.7	28.29
B. 4098 ..	Standard	„	166(9)	3	22.4	33.63
B.45274 ..	Co.421 x B.34104	„	152(4)	1	22.2	26.32
*B.45277 ..	„ x „	„	146(3)	46	21.9	24.60
*B.45292 ..	B.3439 x B.(30)L7 ..	„	87(4)	5	23.0	12.47
B.37161 ..	Standard	XIII	119(5)	18	21.9	26.57
B. 4098 ..	Standard	„	114(5)	9	22.7	23.48
*B.45304 ..	B.37161 x B.37254	„	180(6)	14	21.1	23.56
*B.45312 ..	B.38272 x B.34104 .. .	„	120(3)	15	20.5	26.92
*B.45313 ..	„ x „	„	118(13)	—	20.3	22.02

* These varieties have been discarded as a result of their ratoon performances.

(viii) PROGRESS WITH SEEDLINGS OF THE B.44′ SERIES

The selected seedlings of this series were planted in Third Year Seedling Trials in November, 1946. There were six of these trials which were scattered over the main ecological areas of the Island. These trials were reaped as plant canes during the past crop season, and after a very dry growing season. Yields of all varieties were consequently low, and none of the seedlings of the series proved to be better than the standard varieties B.37161 and B.4098.

Tables VIII, IX, X and XI summarise the results obtained.

TABLE VIII

Third Year Seedling Trials — Plant Canes

Soil Type :— Group II — Low Rainfall

Stations and Dates of Harvesting :— Spring Hall — 23rd and 24th February, 1948
Foursquare — 27th and 28th January, 1948

(Figures are the means of six plots)

Seedling	Parentage	Tons Cane Per Acre		Z H.R. Brix		Sucrose in Juice		No. Rotten Canes per Plot	
		Spring Hall	Four-square	Spring Hall	Four-square	Spring Hall	Four-square	Spring Hall	Four-square
B.37161 ..	Standard	18.07	19.63	23.1	22.4	18.9	18.2	6	6
B.4098 ..	Standard	17.53	19.43	22.7	22.4	18.2	17.9	10	4
B.37172 ..	P.O.J.2878 x B.2935 ..	9.91	14.82	22.0	22.1	19.4	18.0	18	11
B.4335 ..	B.3365 x B.34104 ..	10.45	14.47	23.1	22.9	18.3	19.1	25	8
B.4408 ..	B.3172 x B.34104 ..	15.38	17.10	22.2	21.6	18.2	18.5	12	7
B.4425 ..	B.3354 x B.37175 ..	10.19	14.89	21.0	21.6	16.0	17.6	16	9
B.4466 ..	B.37161 x B.3337 ..	21.10	15.36	21.1	21.0	17.5	17.3	8	4
B.4491 ..	„ x „ ..	13.63	15.45	22.1	21.3	17.4	16.1	9	9
B.44101 ..	B.37161 x P.O.J. 2878	12.96	15.97	23.1	21.8	17.7	16.1	13	6
B.44111 ..	B.40272 x Co.290 ..	16.43	16.01	22.5	22.7	18.4	18.1	16	6
B.44165 ..	B.3354 x B.34104 ..	7.69	11.26	24.3	23.7	20.2	19.5	28	11
B.44182 ..	B.3354 x B.38270 ..	9.95	12.10	21.5	21.6	18.1	16.9	21	6
B.44244 ..	B.35207 x B.34104 ..	13.71	13.92	22.4	22.0	19.0	18.0	14	7
B.44254 ..	B.35207 x P.O.J.2878	9.15	14.34	19.7	20.1	16.8	17.0	49	50
B.44269 ..	B.37161 x B.3337 ..	12.33	14.88	21.9	21.4	17.5	17.1	19	4
B.44278 ..	„ x „ ..	21.16	15.86	21.8	21.3	18.3	16.6	5	4
B.44279 ..	„ x „ ..	14.06	14.66	22.9	22.9	19.3	18.2	12	5
B.44341 ..	B.40272 x Co.290 ..	15.13	19.53	23.2	22.2	18.4	18.3	21	17

Significant Difference P = 0.05 = ± 2.84 tons cane per acre at Spring Hall
± 2.52 „ „ „ „ „ Foursquare

TABLE IX

Third Year Seedling Trials — Plant Canes

Soil Type :— Group II — Intermediate Rainfall

Stations and Dates of Harvesting :— Searles — 22nd and 23rd January, 1948
Portland — 25th and 26th February, 1948

(Figures are the means of six plots)

Seedling	Parentage	Tons Cane Per Acre		Z.H.R. Brix		Sucrose in Juice		No. Rotten Canes Per Plot	
		Searles	Portland	Searles	Portland	Searles	Portland	Searles	Portland
B.37161 ..	Standard	19.76	27.44	22.7	21.8	17.8	16.9	4	5
B.4098 ..	Standard	20.49	28.67	22.9	20.9	19.9	15.9	3	11
B.37172 ..	P.O.J.2878 B.2935 ..	17.04	21.97	23.3	22.5	18.9	18.6	1	9
B.4335 ..	B.3365 x B.34104 ..	16.21	23.23	23.2	19.9	18.9	16.5	4	11
B.4408 ..	B.3172 x B.34104 ..	16.39	26.52	22.9	21.3	18.8	16.4	2	10
B.4425 ..	B.3354 x B.37175 ..	15.69	21.61	22.9	21.8	17.8	16.7	6	14
B.4466 ..	B.37161 x B.3337 ..	17.21	27.14	21.4	21.0	16.7	15.2	2	9
B.4491 ..	„ x „ ..	15.35	19.42	21.7	21.3	17.7	15.3	4	12
B.44101 ..	B.37161 x P.O.J. 2878	17.42	22.31	22.5	21.8	17.9	15.8	4	13
B.44111 ..	B.40272 x Co.290 ..	17.55	25.16	23.3	21.3	18.5	16.4	6	27
B.44165 ..	B.3354 x B.34104 ..	13.51	21.28	24.2	21.7	19.8	18.0	4	18
B.44182 ..	B.3354 x B.38270 ..	18.97	22.95	22.0	20.2	18.1	16.0	3	15
B.44244 ..	B.35207 x B.34104 ..	15.81	20.97	22.3	21.4	17.6	16.4	2	14
B.44254 ..	B.35207 x P.O.J.2878	21.55	21.66	21.7	19.9	17.3	14.3	5	33
B.44269 ..	B.37161 x B.3337 ..	17.38	23.64	21.6	21.1	17.6	16.7	2	10
B.44278 ..	„ x „ ..	16.76	26.09	21.2	21.1	17.4	15.9	1	5
B.44279 ..	„ x „ ..	16.00	21.86	22.9	21.7	17.8	18.2	5	9
B.44341 ..	B.40272 x Co.290 ..	22.29	24.36	24.3	20.7	19.8	14.8	3	22

Significant Difference P = 0.05 = ± 2.64 tons cane per acre at Searles
= ± 3.00 „ „ „ „ „ Portland

TABLE X

Third Year Seedling Trials — Plant Canes
Soil Type — Group II — High Rainfall
Kendal — Harvested :—5th and 6th April, 1948
(Figures are the means of six plots)

Seedling	Parentage	Tons Cane per acre	Z.H.R. Brix	% Sucrose in juice	No. of Rotten Canes per Plot
B.37161 ..	Standard	30.44	20.8	15.6	8
B. 4098 ..	Standard	35.54	22.1	17.5	5
B.37172 ..	P.O.J.2878 x B.2935 ..	25.82	22.1	18.7	6
B. 4335 ..	B.3365 x B.34104	25.41	21.8	17.4	12
B. 4408 ..	B.3172 x B.34104	25.21	21.4	18.3	7
B. 4425 ..	B.3354 x B.37175	30.91	22.1	17.3	11
B. 4466 ..	B.37161 x B.3337	30.22	20.8	16.7	6
B. 4491 ..	„ x „	27.15	21.1	16.7	12
B.44101 ..	B.37161 x P.O.J.2878 ..	27.42	21.4	16.6	16
B.44111 ..	B.40272 x Co.290	23.39	21.8	16.8	49
B.44165 ..	B.3354 x B.34104	25.98	22.9	18.8	14
B.44182 ..	B.3354 x B.38270	28.29	21.0	16.8	14
B.44244 ..	B.35207 x B.34104	28.61	22.2	17.5	9
B.44254 ..	B.35207 x P.O.J.2878 ..	26.94	21.3	16.6	24
B.44269 ..	B.37161 x B.3337	27.37	21.1	16.7	7
B.44278 ..	„ x „	28.23	20.1	15.6	7
B.44279 ..	„ x „	26.49	22.7	18.3	8
B.44341 ..	B.40272 x Co.290	30.07	21.1	17.2	17

Significant Difference P = 0.05 = ± 3.84 tons cane per acre.

TABLE XI

Third Year Seedling Trials — Plant Canes
Soil Type — Group IV — Intermediate Rainfall
Bulkeley — Harvested :—1st and 2nd April, 1948
(Figures are the means of six plots)

Seedling	Parentage	Tons Cane per acre	Z.H.R. Brix	% Sucrose in juice	No. of Rotten Canes per Plot
B.37161 ..	Standard	29.01	23.4	18.7	3
B. 4098 ..	Standard	28.83	23.7	18.7	7
B.37172 ..	P.O.J.2878 x B.2935 ..	27.35	23.6	19.5	7
B. 4335 ..	B.3365 x B.34104	22.97	23.7	19.8	17
B. 4408 ..	B.3172 x B.34104	25.86	23.3	19.2	7
B. 4425 ..	B.3354 x B.37175	26.45	23.8	19.4	7
B. 4466 ..	B.37161 x B.3337	27.31	22.2	18.2	5
B. 4491 ..	„ x „	22.71	23.0	17.3	20
B.44101 ..	B.37161 x P.O.J.2878 ..	25.65	23.8	18.9	4
B.44111 ..	B.40272 x Co.290	29.82	24.1	20.2	9
B.44165 ..	B.3354 x B.34104	22.31	24.5	20.7	7
B.44182 ..	B.3354 x B.38270	27.50	23.0	18.0	7
B.44244 ..	B.35207 x B.34104	25.17	24.0	19.9	4
B.44254 ..	B.35207 x P.O.J.2878 ..	32.73	22.6	17.9	8
B.44269 ..	B.37161 x B.3337	24.60	22.0	18.4	4
B.44278 ..	„ x „	26.45	21.5	17.8	5
B.44279 ..	„ x „	23.19	23.4	20.0	5
B.44341 ..	B.40272 x Co.290	31.19	24.0	20.9	4

Significant Difference P = 0.05 = ± 2.74 tons cane per acre.

B.44341 was perhaps the best of the seedlings tried. It is a light green cane with a heavy bloom of white wax, and may show purplish tinges where exposed to light. It germinates readily and the canes grow rapidly. The trash is inclined to be hard, but it comes away from the canes quite readily. In the Second Year Seedling Trial at Bowmanston, the canes were exceptionally thick, but in the trials reaped this year, they can only be described as of medium width. The variety tends to arrow profusely in Barbados, but the canes remain very sound and it invariably has an excellent juice. B.44341 appears to be very highly resistant to the Barbados strain of mosaic disease under artificial inoculation.

B.44254, the other variety which was expected to perform well, did not live up to expectations and gave some very indifferent, as well as some very good yields, while the juice quality was very poor. We have previously had seedlings which showed this curious behaviour, and after exhaustive trials they have proved to be of little value for commercial purposes. It is therefore considered that this variety is not worthy of further trial.

B.4466 also gave some fairly good cane yields, but like its female parent B.37161, it tends to hold its trash very firmly and the juice quality is inclined to be poor.

(ix) PROGRESS WITH SEEDLINGS OF THE B.43′ SERIES

The seedlings of this series were reaped as plant canes in the Third Year Seedling Trials in 1947. The trials at Spring Hall and Carrington had to be abandoned by the plantations on account of the very severe drought conditions, and the fields were ploughed up. In spite of adverse conditions, the trials at Kingsland and Foursquare were allowed to ratoon and yields were consequently very low. It was only at Colleton and Blackmans that yields approached normal, but even at these centres the crop suffered severely from water shortage from time to time. The results of these trials are presented in Tables XII, XIII and XIV.

TABLE XII

Third Year Seedling Trials — First Ratoons

Soil Type — Group II — Low Rainfall

Kingsland — Harvested :—2nd and 3rd February, 1948

Seedling	Parentage	Tons Cane per Acre	Z.H.R. Brix	No. of Rotten Canes per Plot
B.37161 ..	Standard	7.73	22.2	1
B.4098 ..	Standard	8.19	22.9	1
B.4214 ..	B.3365 x Co.290	6.01	22.4	1
B.42114 ..	B.35218 x P.O.J.2878 .	11.36	22.9	1
B.4306 ..	B.35206 x P.O.J.2878 .	8.35	22.6	2
B.4327 ..	B.34102 x B.3337 .. .	5.46	22.0	1
B.4329 ..	„ x „ .. .	9.01	22.1	1
B.4362 ..	B.37161 x P.O.J.2878 .	6.64	23.9	2
B.4363 ..	„ x „ .	5.01	22.6	1
B.4381 ..	B.3354 x Co.290	8.16	21.4	2
B.43127 ..	B.37227 x B.3337 .. .	11.97	22.2	2
B.43133 ..	B.35247 x B.3337 .. .	9.07	21.7	2
B.43139 ..	B.39157 x Co.281	11.43	20.9	—
B.43214 ..	B.3353 x Co.290 ..	7.47	22.6	2
B.43229 ..	B.3365 x B.34104	2.39	22.3	1
B.43234 ..	„ x „ .. .	4.53	21.8	1
B.43235 ..	„ x „ .. .	4.41	21.7	1
B.43262 ..	B.34102 x B.3337	7.52	22.6	2
B.43330 ..	B.35247 x B.3337	9.09	21.5	1
B.43337 ..	„ x „ .. .	12.06	21.1	2
B.43358 ..	B.3365 x B.34104	3.36	21.8	3
B.43391 ..	B.35247 x B.3337	7.11	21.4	3
B.43398 ..	„ x „	7.68	21.5	1
B.43413 ..	M.D.47 x Co.290	9.15	21.4	4

Significant Difference P = 0.05 = ± 1.93 tons cane per acre.

TABLE XIII

Third Year Seedling Trials — First Ratoons

Soil Type — Group II — Intermediate Rainfall

Foursquare — Harvested :—29th and 30th January, 1948

(Figures are the means of six plots)

Seedling	Parentage	Tons Cane per Acre	Z.H.R. Brix	No. of Rotten Canes per Plot
B.37161 ..	Standard	8.07	22.0	1
B.4098 ..	Standard	4.34	21.2	5
B.4214 ..	B.3365 x Co.290	2.53	20.2	3
B.42114 ..	B.35218 x P.O.J.2878 ..	8.36	22.6	2
B.4306 ..	B.35206 x P.O.J.2878 ..	4.53	21.6	5
B.4327 ..	B.34102 x B.3337	3.23	21.2	1
B.4329 ..	„ x „	7.23	21.2	2
B.4362 ..	B.37161 x P.O.J.2878 ..	5.94	22.3	3
B.4363 ..	„ x „	4.09	20.5	4
B.4381 ..	B.3354 x Co.290	4.08	20.3	4
B.43127 ..	B.37227 x B.3337	16.99	21.4	4
B.43133 ..	B.35247 x B.3337	13.09	21.2	1
B.43139 ..	B.35197 x Co.281	12.11	19.1	5
B.43214 ..	B.3353 x Co.290	2.75	20.7	4
B.43229 ..	B.3365 x B.34104	3.66	21.9	3
B.43234 ..	„ x „	4.31	20.4	4
B.43235 ..	„ x „	5.72	20.5	6
B.43262 ..	B.34102 x B.3337	6.78	21.2	7
B.43330 ..	B.35247 x B.3337	12.13	20.1	7
B.43337 ..	„ x „	10.16	19.6	3
B.43388 ..	„ x „	10.23	20.8	1
B.43394 ..	„ x „	7.47	20.5	5
B.43398 ..	„ x „	12.23	20.0	8
B.43413 ..	M.D.47 x Co.281	5.58	21.0	8

Significant Difference P = 0.05 = ± 2.14 tons cane per acre.

Table XIV

Third Year Seedling Trials — First Ratoons

Soil Type — Group II — High Rainfall

Stations and Dates of Harvesting :—Colleton—19th and 22nd March, 1948
Blackmans—8th and 9th April, 1948

(Figures are the means of six replicates)

Seedling	Parentage	Tons Cane per Acre		Z.H.R. Brix		No of Rotten Canes per Plot	
		Colleton	Blackmans	Colleton	Blackmans	Colleton	Blackmans
B.37161 ..	Standard	29.77	26.11	23.3	21.0	5	19
B.4098 ..	Standard	31.04	31.67	23.1	22.2	6	21
B.4214 ..	B.3365 x Co.290 ..	25.05	24.79	23.6	22.0	7	19
B.42114 ..	B.35218 x P.O.J.2878	28.73	10.73	23.5	21.7	15	159
B.4306 ..	B.35206 x P.O.J. 2878	26.22	26.97	23.2	22.0	16	18
B.4327 ..	B.34102 x B.3337 ..	25.85	26.08	23.4	21.9	5	14
B.4329 ..	„ x „ ..	30.77	30.28	20.9	20.6	10	9
B.4362 ..	B.37161 x P.O.J.2878	29.61	20.86	24.0	22.6	8	36
B.4363 ..	„ x „ ..	24.31	26.69	23.1	21.4	8	7
B.4381 ..	B.3354 x Co.290 ..	23.59	21.70	21.8	20.8	13	40
B.43127 ..	B.37227 x B.3337 ..	33.54	26.27	22.1	20.7	12	40
B.43133 ..	B.35247 x B.3337 ..	30.40	25.87	22.0	20.7	6	27
B.43139 ..	B.35197 x Co.281 ..	22.05	25.86	20.6	20.0	10	17
B.43229 ..	B.3365 x B.34104 ..	20.19	26.25	24.6	23.4	10	35
B.43234 ..	„ x „ ..	23.54	23.75	22.8	21.2	6	8
B.43235 ..	„ x „ ..	22.24	21.03	22.9	21.0	24	83
B.43262 ..	B.34102 x B.3337 ..	25.29	21.28	22.5	21.1	11	36
B.43275 ..	B.35197 x B.34104 ..	24.26	23.88	22.5	22.6	10	17
B.43330 ..	B.35247 x B.3337 ..	26.84	20.57	21.9	20.1	13	54
B.43337 ..	„ x „ ..	27.89	36.83	21.2	21.4	7	7
B.43358 ..	B.3365 x B.34104 ..	21.59	23.81	22.5	21.6	7	10
B.43391 ..	B.35247 x B.3337 ..	35.08	40.07	22.5	21.2	14	19
B.43398 ..	„ x „ ..	32,68	26.75	22.1	21.0	5	16
B.43413 ..	M.D.47 x Co.290 ..	22.32	24.94	22.3	21.2	14	18

Significant Difference P = 0.05 = ± 3.45 tons cane per acre at Colleton
= ± 4.35 „ „ „ „ „ Blackmans

At Foursquare, eight of the varieties exceeded the standards B.37161 and B.4098 on ratoon cane yield, while at Kingsland, ten proved to be better. As a ratoon cane B.43127 was outstanding at both of these centres, but its plant cane results were not so good. In addition, it holds its trash very firmly and the juice is of fair quality only. However, it performed extremely well under the very dry conditions. Of the varieties which yielded well as plant canes, B.43337 also did well as a ratoon, but its juice quality was poor at Foursquare and fair only at Kingsland. B.43391 gave approximately the same yield as B.37161, and had juice of fair quality only. This variety and B. 43337 were outstanding in all trials as plant canes.

The conditions under which these trials grew were so abnormal for Barbados, that it speaks well for the seedlings that they were not killed completely and little purpose can be served in discussing the results further.

At Colleton, three varieties, viz., B.43127, B.43391 and B.43398 exceeded both the standard varieties on yield of cane, while B.4329, B.4362 and B.43133 gave yields comparable with those given by the standards. B.43391 was the outstanding variety, as it was in the plant cane trial, giving an average yield of 35.08 tons cane per acre. It was very sound, trashed well and had a fairly good juice, while arrowing was conspicuous by its absence. B.43127 gave an average yield of 33.54 tons cane per acre and had a fairly good juice, but arrowed heavily and was very difficult to clean. B.43398 cannot be considered as a commercial cane, as it is very thin and fibrous, difficult to clean, arrows heavily and has a poor juice.

B.4362 performed well under the circumstances. It is a green cane which trashes well, has an excellent juice, but tends to arrow heavily in the higher rainfall districts of Barbados. It appears to favour wetter conditions than normally occur in Barbados, particularly where these coincide with conditions which do not favour arrowing.

In the trial at Blackmans, only two varieties, B.43337 and B.43391 exceeded the yields given by the standard B.4098, while six others exceeded B.37161. In this trial many of the plots were severely damaged by rats. This was reflected in the large numbers of rotten canes found. B.43391 was outstanding in this trial, giving an average yield of 40.07 tons cane per acre with a fairly good juice, while B.43337 gave 36.83 tons cane per acre with a juice of much the same quality as B.43391.

From the results of the Third Year Seedling Trials to date, it would appear that B.43391 is the outstanding cane for Barbados conditions, and is likely to be cultivated on a commercial scale in the near future. B.43337 is also a very vigorous cane, but tends to arrow too heavily particularly in the high rainfall districts of Barbados.

(x) PROGRESS WITH SEEDLINGS OF THE B.42′ AND EARLIER SERIES SELECT SEEDLING TRIALS

A. The Seedlings Tested

First Ratoons	..	B.34104, B.37161, B.4098, B.41211, B.41227
Second Ratoons	..	B.34104, B.37161, B.4098, B.41211, B.41227

B. An Ecological Classification of the Trials — Turner's Classification.

This classification was proposed by Turner after a study of the sugar cane soils of the British West Indian Colonies, and is as follows :—

Group I:— Soils with a natural tilth and free natural drainage which require neither to be ploughed nor drained.

Group II:— Soils with a tilth that can be improved by ploughing but which do not require to be drained.

(b) *Intermediate Rainfall Areas*

Select Seedling Trials

First Ratoons .. .. Waterford.

(c) *High Rainfall Areas*

Select Seedling Trials

First Ratoons .. .. Lancaster and Mt. Wilton

Second Ratoons .. .. Andrews.

Group III:—Soils which require to be drained but are preferably left unploughed.

Group IV:—Soils with a poor natural tilth in which a tilth can be created by ploughing, but which require to be drained to maintain their tilth.

(b) *Intermediate Rainfall Areas*

Select Seedling Trials

First Ratoons .. .. Bulkeley.

TABLE XV

C. RAINFALL DURING THE SEASON.

Month	1925-26 to 1944-45	1945-46	1946-47	1947-48
January	3.17	0.84	4.03	3.66
February	1.59	1.28	2.12	1.39
March	1.69	0.59	0.78	0.66
April	1.88	4.96	3.60	1.23
May	2.36	6.37	3.42	1.11
June	4.37	5.33	3.41	7.53
July	6.45	5.38	5.30	7.99
August	6.30	10.29	5.65	2.31
September	7.45	7.62	5.91	2.85
October	8.33	4.57	2.77	5.09
November	10.08	6.89	3.89	2.70
December	4.26	2.55	5.77	2.28
January	3.09	4.03	3.66	3.01
February	1.57	2.12	1.39	1.30
March	1.66	0.78	0.66	2.83
Totals	64.25	63.60	52.36	45.94

It will be noted that the total rainfall for the 1947-48 season was below that for 1946-47. However, the distribution was very different, most of the rainfall being received in small amounts, which with the dry conditions prevailing had little or no effect on the growth of the crop. As an example of the poor distribution experienced, the case of an estate in the low rainfall area may be cited. Here the total fall registered for the year 1947 was 26 inches, and the heaviest fall recorded was 0.75 inches. As a result of the poor rainfall and bad distribution, yields were low and the sugar crop fell from approximately 111,000 tons in 1947 to 78,000 tons. As a result of these conditions, many ratoon fields in the low and intermediate rainfall areas had to be abandoned, and with them went most of our ratoon trials in these categories.

TABLE XVI

Group II (b) Waterford — First Ratoons

Harvested :—20th February, 1948

Figures are the means of four plots of 40 cane holes each

Variety	Tons Cane per Acre	Z.H.R. Brix	Rotten Canes per Plot
B.37161	10.16	21.9	9
B. 4098	8.81	22.8	4
B.41211	10.41	22.5	4
B.41227	10.18	22.2	8

In this trial, B.41211 gave the heaviest yield of cane, followed by B.41227, B.37161 and B.4098 but the differences between mean yields cannot be shown to be statistically different. The yields were very low and, under the growth conditions which prevailed during the season, it speaks well for the varieties that they did not die out altogether. B.4098 gave juice of the best quality, followed by B.41211 and B.41227.

TABLE XVII

Group II (c) Lancaster and Mount Wilton — First Ratoons

Harvesting Dates :—Lancaster — 14th April, 1948

Mount Wilton — 15th April, 1948

Figures are the means of five plots of 40 cane holes each

Variety	Tons Cane per Acre		Z.H.R. Brix		No. of Rotten Canes per Plot	
	Lancaster	Mt. Wilton	Lancaster	Mt. Wilton	Lancaster	Mt. Wilton
B.34104	21.58	37.05	24.7	22.3	62	32
B.37161	28.73	35.28	23.6	21.2	21	14
B.4098	29.85	38.36	23.4	22.2	22	17
B.41211 .. .	30.56	47.83	23.0	21.6	26	26
B.41227 .. .	30.32	42.11	23.9	21.6	25	26

Significant Difference P = 0.05 = ± 3.56 tons cane per acre at Lancaster
± 3.60 „ „ „ „ „ Mt. Wilton

At Lancaster, B.41211 gave the heaviest yield of First Ratoon cane followed by B.41227, B.4098 and B.37161 but the differences between the mean yields of these varieties cannot be shown to be significant. All of these varieties were significantly better than B.34104. B.34104 gave juice of best quality, followed by B.41227, B.37161 and B.4098. However, the juice qualities of all the varieties tested were quite good.

At Mount Wilton, B.41211 gave the heaviest yield of ratoon cane, greatly and significantly exceeding all other varieties tested. B.41227 gave the next highest yield, significantly exceeding B.34104, B.37161 and B.4098. The differences between the mean yields of B.4098, B.34104 and B.37161 cannot be shown to be significant. B. 34104 gave the juice of best quality, closely followed by B.4098, B.41211, B.41227 and B.37161 in that order.

TABLE XVIII

Group II (c) Andrews — Second Ratoons
Harvested :—16th April, 1948

Figures are the means of four plots

Variety	Tons Cane per Acre	Z.H.R. Brix	No. of Rotten Canes per Plot
B.34104	31.19	22.0	36
B.37161	34.20	22.7	14
B.4098	33.18	22.4	18
B.41211	30.39	22.2	34
B.41227	39.16	21.6	18

Significant Difference P = 0.05 = ± 3.31 tons cane per acre.

In this trial, the variety B.41227 greatly and significantly exceeded all other varieties tried on yield of second ratoon cane. B.37161 was significantly better than B.41211, but the differences between the mean yields of B.37161, B.4098 and B.34104 cannot be shown to be significantly different. B.37161 gave the juice of the best quality and B.41227 the juice of poorest quality. There was little to choose between the juice qualities of the other varieties.

In this trial, B.34104 and B.41211 suffered to some extent from rat damage, but this was not so severe as in the plant cane and first ratoon crops.

TABLE XIX

Group IV (b) Bulkeley — First Ratoons
Harvested :—24th March, 1948

Figures are the means of four plots of forty cane holes each

Variety	Tons Cane Per Acre	Z.H.R. Brix	No. of Rotten Canes per Plot
B.37161	21.78	24.1	6
B.4098	20.92	24.3	3
B.41211	21.71	24.0	3
B.41227	23.75	23.9	10

Differences between mean yields are insignificant

In this trial, the rainfall during the growing season was very poor, but owing to the heavy texture of the soil, soil moisture was maintained for a longer period than was the case with the Group II soils, and the crop made better use of it. B.41227 gave the highest yield followed by B.37161, B.41211 and B.4098. The differences between mean yields were, however, small and cannot be shown to be significantly different. B.4098 gave the juice of best quality, but there was little to choose between the juice qualities of any of the varieties, all of which were very good.

SUMMARY

Generally speaking, rainfall in the low and intermediate rainfall areas was so poor and badly distributed that it would not have been surprising if the crops had died out completely. That they did not, says much for the vitality of the sugar cane plant, which is indeed amazing. In some of the intermediate rainfall districts and particularly in the high rainfall districts, conditions were somewhat better. B.41211 has again demonstrated its ability to give good yields under all the ecological conditions of Barbados. This variety is very soft and relished by rats, and it has recently been reported that the burning of the bagasse is not all that it should be. Whether this is due to some inherent quality of the variety, or to some other cause which can be corrected in the factory, is a matter on which no opinion can be expressed at the moment.

B.41227 has also given some excellent yields of cane, and when ripe has a very good juice. It is probable that heavy arrowing will limit its usefulness in Barbados. Some of the canes of this variety, particularly the later shoots, tend to develop a pithiness in the centre of the cane, which may develop a small hollow core. In spite of this, the canes are very heavy and the variety has given some of the heaviest yields of sugar recorded in trials in Barbados.

B.4098 is an excellent variety, which has been recommended for commercial cultivation for the past two or three years. It is not liked by many planters on account of its tendency to arrow heavily, particularly in the high rainfall areas. It appears to favour the heavier types of soil and ripens about mid crop. Its juice quality is excellent, and the trash comes away easily leaving the canes very clean. One of its defects is that the eyes near the top of the cane tend to develop as the cane ripens, and these have to be trimmed off by the cutters.

III. DESPATCH OF SEEDLINGS TO CONTRIBUTING COLONIES

At the Fourteenth Meeting of the Advisory Committee held in Jamaica during September, 1947, it was decided that since the facilities for quarantine in Trinidad did not afford any greater protection than could be expected in Barbados, seedling planting material should be distributed, by permit where necessary, to the Departments of Agriculture of the contributing colonies.

It was not possible to send out planting material of the B.45′ Series in October, 1947, as is customary owing to the effect on the cane of the very dry conditions and the heavy incidence of moth borer.

Planting material was sent after the Second Year Seedling Trials were reaped in April 1948. Since the yield results of the ratoon trials were then available, it was possible to make a more rigorous selection and a total of only six varieties was issued. The distribution of these varieties was as follows :—

To all Colonies :—	B.45188
	B.45224
	B.45270
To Jamaica, Trinidad and British Guiana :—	B.45264
	B.45274
To Trinidad and British Guiana only:—	B.45267

This lot represents the selections from one-half only of the B.45′ Series of seedlings, as the plant cane trials at Pool and Bowmanston were burnt and it was only possible to reap, and select, from the Bowmanston trial. At Pool, the selections were made from the ratoon crop and these will be sent out in October, 1948.

IV. PERFORMANCES OF SEEDLINGS IN CONTRIBUTING COLONIES

B.37161 continues to be the dominant variety cultivated in Barbados, and performed creditably during the past very dry season. The average rainfall for the island was not far below that of the previous year, but the distribution was very poor. Much of the rainfall recorded was received in small showers of 10 — 20 parts, which with the dry conditions prevailing, had little or no effect on the growth of the crop. As an example of this, one plantation in the low rainfall area recorded 26 inches of rainfall for the year 1947, and the heaviest fall was 0.75 inches. As a result of the low rainfall and poor distribution, the island's crop was down to the equivalent of just over 78,000 tons of sugar, and it speaks well for the varieties grown that they did not die out entirely in the drier areas of the island.

The variety B.4098 is being planted on an increasing scale, and continues to give satisfactory yields. It has the advantage of a better juice than B.37161, but on the other hand, it arrows heavily particularly so in the high rainfall areas, and this limits cane growth and so the final yield.

The varieties B.41211 and B.41227 have been released for general cultivation, and have continued to do well in trials. B.41211 yields well in any part of the island, but is particularly good in the low rainfall areas. B.41227 is at its best in the intermediate rainfall areas. It does not perform well under very dry conditions and in the high rainfall areas it arrows freely, which limits the yield.

The variety per cent. acreage figures for the 1948 crop are given below :—

Variety	% Acreage
B.H.10(12)	1.36
B. 726	0.70
B. 2935	0.23
B.34104	1.24
B.35187	1.91
B.37161	90.00
B. 4098	3.43
Others	1.13
Total	100.00

ST. KITTS

The conditions in St. Kitts have been found to be very much like those obtaining in Barbados, and generally speaking, the varieties which perform best in Barbados also do so in St. Kitts.

The variety per cent. acreage figures for St. Kitts are given below :—

Variety	% Acreage
B.H.10(12)	1.21
B. 2935	0.61
B. 3439	2.69
B.34104	4.76
B.35187	1.14
B.37161	84.69
B. 4098	1.93
B.41211	0.31
Mixed	2.66
Total	100.00

As in Barbados, B.37161 is the dominant variety by quite a wide margin. B.3439 and B.34104 are still grown to an appreciable extent, while the areas under B.4098 and B.41211 are increasing. B.4098 has not been so outstanding in trials in St. Kitts as is the case in Antigua. It has been reported that B.4098 tends to uproot very easily in St. Kitts.

ANTIGUA

The variety position in Antigua for the 1948 crop is given in the table below :—

Variety	% Acreage
B. 3439	12.34
B.34104	22.77
B.37161	55.66
B. 4098	6.72
B.37172	2.31
Others	0.20
Total	100.00

As will be observed from this table, B.37161 is the dominant variety, followed by B.34104. B.37172 has done well on non-calcareous clays which have been given a deep tilth. B.4098 was outstanding in variety trials both as plants and first ratoons, and will no doubt continue to expand at the expense of B.37161 and B.34104. It has been recommended for planting on up to 50% of the ploughed area to be planted on certain soil types for the 1949 crop. B.37172 has also done well and has been recommended for planting on up to 60% of the ploughed area on certain soil types.

BRITISH GUIANA

The testing of seedlings in British Guiana appears to be proceeding rapidly and systematically, and has now reached the stage where it has been possible to recommend that one of the seedlings which was first received be planted on estates on a scale sufficient for factory tests, while others will be retained for further trial and others have been discarded.

B.37161 has shown sufficient promise to be recommended for factory trials, while B.3337, B.37193 and B.41211 are to be tested further; B.3439 and B.35187 are to be discarded.

The variety per cent. acreage figures for the 1948 crop are given in the table below :—

Variety	% Acreage
B.34104	22.61
Co.421	19.34
D.14/34	17.39
Diamond 10	14.37
P.O.J.2878	13.55
Co.419	8.16
D.200/36	1.91
D.166/34	0.49
Others	2.18
Total	100.00

This represents a complete change over from the variety picture of a few years ago, when P.O.J.2878 occupied over 50% of the total acreage while D.14/34 and B.34104 were just beginning to appear in the table. Both of these varieties together with Co.421 have expanded mainly at the expense of P.O.J.2878.

B.34104 is the only commercial cane grown in British Guiana which has been produced by the Station. It is capable of heavy yields under British Guiana conditions, and has a good juice. It is reported that a severe dry spell early in the life of the crop may adversely affect yields, and that it appears to be very palatable to rats.

TRINIDAD

In Trinidad, the varieties B.3337, B.34104, B.37161 and B.37172 all appear to perform well, but under different conditions, B.3337 appears to favour free draining conditions where there is a distinct water shortage during the dry season, while B.34104 does best where there is no serious water shortage during the dry season. B.37172 appears to favour well-drained soils with a deep tilth, and has the best juice of the lot. This information on the four varieties mentioned above has been known for some time, but so far, B.4098 has been grown in very few trials while B.41211 and B.41227 do not appear to have reached the trial stage yet, although they may be considered to have been fully tested in Barbados. Reports on the commercial possibilities of B.41211 and B.41227 vary with the various soil types on which they have been grown, but generally speaking, B.41227 appears to be the more promising under Trinidad conditions. None of the B.42′ Series appears to have commercial possibilities, while it is too early yet to say anything about the B.43′ Series.

The table below gives the variety per cent. acreage figures for the 1948 crop.

Variety	% Acreage
B.34104	54.55
B. 3337	17.04
B.37161	9.15
B.37172	7.09
Co.213	5.03
B.H.10(12)	3.63
Co.421	0.47
B.4098	0.40
Co.419	0.20
B.38192	0.19
P.O.J.2878	0.18
B.37193	0.08
B. 3439	0.08
Others & Mixed	1.92
Total	100.01

JAMAICA

A visit was paid to Jamaica in October, 1947, when the variety situation was discussed with the authorities on the spot. B.34104 is the principal commercial variety, but is unfortunately highly susceptible to mosaic disease, to which it appears to display a great degree of tolerance. This does not appear to have affected the yield so far, but it is impossible to forecast what effect pro-

longed infection with this disease will have on the yielding capacity of the variety. Further, as this variety is being grown on a very large scale, it would be virtually impossible to introduce a highly susceptible but otherwise desirable variety, as it would be impossible to keep such a variety free of the disease when such extensive sources of infection exist. The variety B.41227 appears to be very highly resistant to mosaic disease and further in the single trial in which it was included, outyielded B.34104 by 20% on sugar. It was accordingly recommended that direct comparisons between B.34104 and this variety be run, and that factory trials should be carried out at the same time. It was also recommended that disease-free cuttings of B.34104 should be sent to Jamaica from Barbados, and that trials be laid down comparing this with cane grown from material which had been infected for a long period.

As far as the variety situation is concerned, B.3439, a noble cane, continues to occupy an important position in the industry, as it has an excellent juice early in the crop, and is highly resistant to mosaic. B.37172, another resistant variety, is being grown on a considerable scale on the East and North East coast at Jamaica Sugar Estates and Grays Inn. This variety also has an excellent juice and appears to favour the conditions encountered on these particular estates.

Recommendations were made for the more efficient testing of the seedlings of all Series up to and including the B.44′ Series. Of this lot B.43337 appeared to be outstanding, but no forecast as to the probable outcome of this variety in Jamaica can be made, as it was only seen in multiplication plots and these were only half-grown. This variety together with B.43391 have both been shown to be susceptible to mosaic disease in Barbados, but at the time of the writer's visit had not taken the disease in Jamaica.

V. A NOTE ON MOSAIC DISEASE TRIALS IN BARBADOS

The B.45′ Series of seedlings was tested for resistance to mosaic disease during the year. Five one-eye cuttings of each variety were planted in pots, and when they were about 15 inches tall were inoculated by the Sein method, using B.2935 material collected from the Mental Hospital many years ago. None of the seedlings showed disease symptons after four months and all were then destroyed.

One hundred healthy Ba.11569 plants were inoculated at the same time to serve as a check, and only ten of these showed the disease symptoms.

It would therefore appear that the mosaic from this source may be losing its virulence, as the percentage of 'takes' appears to be getting progressively smaller. It has recently been reported from Puerto Rico that the virulence of the virus is increased by passing it through sorghum, and this method will be tried during the coming season.

VI. STATEMENT OF EXPENDITURE FOR 1947-48

		£	s.	d.
1.	Personal Emoluments	2,013	18	11
2.	Provident Fund	80	0	0
3.	Seedling Trials	2,382	14	1
4.	Stationery and Library	91	18	4
5.	Travelling	242	11	7
6.	Incidentals	34	0	3
7.	Capital	811	0	7
	Total	£5,656	3	9

APPENDIX I

Sugar Cane Breeding, Seedling Raising and Field Nursery Planting 1947-1948
B.50' Series and B.s.49' Series.

Details of Crosses made, their Germinations, Numbers Potted and Numbers Planted in the Field Nursery and B.s. 49' Series First Year Seedling Trial.

Cross	Group	No. Germinated Nov. 1947 to Jan 1948	No. Potted Jan-March 1948	No. Planted in Field Nursery	No. Planted in First Year Trial
	S. officinarum x S. spontaneum				
B.3439 x B.40123 ..	Noble x Local	500	500	345	99
B.4196 x B.37256 ..	„ x „	4	—	—	—
B.35247 x B.4327 ..	„ x Celebes x Glagah..	300	300	219	—
		804	800	564	
	S. officinarum x S. barberi				
B.3439 x B.40175 ..	Noble x Chunnee	300	300	238	—
	S. officinarum x S. barberi x S. spontaneum				
B.3365 x B.34104 ..	Noble x Chunnee x Local ..	300	300	259	—
B.35207 x B.34104 ..	„ x „ x „ ..	260	260	230	—
B.3365 x B.4098 ..	„ x „ x „ ..	550	550	428	
B.45316 x B.H.10(12)	„ x „ x „ ..	—	—	—	—
B.45170 x B.4098 ..	„ x „ x „ ..	4,000	1,000	733	200
B.35218 x B.4098 ..	„ x „ x „ ..	450	450	403	—
B.45166 x B.H.10(12)	„ x „ x „ ..	150	150	120	—
B.3439 x B.45236 ..	„ x „ x „ ..	600	500	397	100
B.45102 x B.H.10(12)	„ x „ x „ ..	210	210	207	—
B.39240 x B.4098 ..	„ x „ x „ ..	45	45	33	—
B.37194 x B.4098 ..	„ x „ x „ .	50	50	40	—
B.35206 x B.34104 ..	„ x „ x „ ..	44	44	29	—
B.3439 x Co.290 ..	„ x „ x „ ..	150	150	123	—
B.37161 x B.34104 ..	„ x „ x „ ..	18	18	12	—
B.37161 x B.4098 ..	„ x „ x „ ..	7,500	5,500	4,710	500
B.3439 x B.45122 ..	„ x „ x „ ..	6	—	—	—
B.35197 x B.34104 ..	Noble x Chunnee x Local x Celebes	4,000	1,800	1,188	486
B.35247 x B.34104 ..	„ x „ x „ ..	5,000	1,500	980	413
B.35197 x B.4098 ..	„ x „ x „ ..	1,000	720	588	107
B.35247 x B.4098 ..	„ x „ x „ ..	1,200	1,000	797	207
B.35247 x B.40118 ..	„ x „ x „ ..	220	220	215	—
Co.421 x B.41227 ..	Noble x Chunnee x Glagah	380	380	340	—
B.3439 x B.37175 ..	„ x „ x „ ..	24	24	19	—
B.35207 x P.O.J.2878..	„ x „ x „ ..	—	—	—	—
B.35206 x P.O.J.2878..	„ x „ x „ ..	4	—	—	—
B.4362 x B.H.10(12)	„ x „ x „ ..	8	8	8	—
B.35197 x B.41227 ..	Noble x Chunnee x Glagah x Celebes	275	275	128	—
B.35247 x B.41227 ..	„ x „ x „ ..	4,000	800	600	119
Co.421 x B.45109 ..	„ x „ x „ ..	400	400	340	—
B.35197 x B.37175 ..	„ x „ x „ ..	5	—	—	—
B.35247 x B.37175 ..	„ x „ x „ ..	58	58	38	—
P.O.J.2364 x B.34104..	Noble x Chunnee x Glagah x Local	80	80	79	—

APPENDIX I *(Continued)*

Cross	Group	No. Germinated Nov: 1947 to Jan. 1948	No. Potted Jan.— March 1948	No. Planted in Field Nursery	No. Planted in First Year Trial
	Noble x Chunnee x Glagah x				
B.38233 x B.34104 ..	Local	370	370	309	—
B.38203 x B.34104 ..	„ x „ x „ ..	550	550	396	98
P.O.J.2364 x B.4098..	„ x „ x „ ..	270	270	239	—
B.45186 x B.4098 ..	„ x „ x „ ..	400	400	372	—
B.34117 x B.4098 ..	„ x „ x „ ..	375	375	230	—
B.45170 x P.O.J.2878..	„ x „ x „ ..	81	81	43	—
B.35218 x P.O.J.2878..	„ x „ x „ ..	30	30	20	—
B.35218 x B.38281 ..	„ x „ x „ ..	28	28	22	—
B.38233 x B.4098 ..	„ x „ x „ ..	600	600	444	92
B.38203 x B.4098 ..	„ x „ x „ ..	124	124	123	—
B.45170 x B.4306 ..	„ x „ x „ ..	15	15	15	—
B.45170 x B.37175 ..	„ x „ x „ ..	19	19	13	—
B.41277 x B.4098 ..	„ x „ x „ ..	45	45	36	—
B.34102 x B.34104 ..	„ x „ x „ ..	2,500	1,000	699	97
B.37172 x B.34104 ..	„ x „ x „ ..	40	40	36	—
B.37172 x B.4098 ..	„ x „ x „ ..	8	8	8	—
B.37172 x B.42231 ..	„ x „ x „ ..	—	—	—	—
B.38212 x B.4098 ..	„ x „ x „ ..	280	280	193	—
B.4362 x B.4098 ..	„ x „ x „ ..	300	300	240	—
Co.421 x B.43290 .	Noble x Chunnee x Glagah x Local x Celebes	950	950	634	196
Co.421 x B.43375 ..	„ x „ x „ ..	1,700	1,700	938	200
B.43380 x P.O.J.2878..	„ x „ x „ ..	—	—	—	—
B.43349 x B.4098 ..	„ x „ x „ .	140	140	139	—
		39,812	23,817	18,193	2,821
	S. officinarum x S. sinense				
C.H.64/21xB.H.10(12)	Noble x sinense	—	—	—	—
	S. officinarum x S. spontaneum x S. sinense				
	Noble x Glagah x Sinense..	170	170	165	—
B.3439 x B.45116 ..	„ x „ x „ ..	—	—	—	—
B.4196 x B.37261 ..	Noble x Glagah x Celebes x				
B.40272 x B.44237 ..	Sinense	350	350	337	—
		520	520	502	
	S. officinarum x S. barberi x S. spontaneum x S. sinense				
B.39254 x B.4098 ..	Noble x Chunnee x Local x Sinense	80	80	77	—
B.3439 x B.4543 ..	Noble x Chunnee x Glagah x Sinense	300	300	250	—
B.45115 x B.H.10(12)..	„ x „ x „ ..	—	—	—	—
B.43349 x B.45315 ..	Noble x Glagah x Chunnee x Local x Celebes x Sinense	—	—	—	—
B.40272 x B.4098 ..	Noble x Glagah x Chunee x Local x Sinense	53	53	37	—
B.40272 x Co.281 ..	„ x „ x „ ..	400	400	379	—
B.45220 x B.4098 ..	„ x „ x „ ..	372	372	246	—
B.40272 x Co.290 ..	„ x „ x „ ..	60	60	55	—
B.44305 x B.H.10(12)..	„ x „ x „ ..	9	—	—	—
		1,274	1,265	1,044	—

APPENDIX I *(Concluded)*

Cross	Group	No. Germinated Nov: 1947 to Jan: 1948	No. Potted Jan.—March 1948	No. Planted in Field Nursery	No. Planted in First Year Trial
	S. officinarum x S. spontaneum x S. robustum				
B.44233 x B.4327 ..	Noble x Glagah x Robustum				
B.4457 x B.4327 ..	„ x „ x „ ..	5,000	250	235	—
	S. officinarum x S. barberi x S. robustum	3,000	250	200	—
		8,000	500	435	—
B.3365 x B.4454 ..	Noble x Chunnee x Robustum	140	140	120	—
B.45107 x B.H.10(12)	„ x „ x „ ..	—	—	—	—
		140	140	120	—
	S. officinarum x S. barberi x S. spontaneum x S. robustum				
B.4587 x B.4098 ..	Noble x Chunnee x Local x Robustum	65	65	60	—
B.45223 x B.4098 ..	„ x „ x „ ..	3,400	500	478	—
B.4457 x Co.419 ..	Noble x Chunnee x Glagah x Local x Robustum ..	60	60	60	—
C.P.36—158 x B.4098	„ x „ x „ .	50	50	44	—
B.4373 x B.4454 ..	„	40	40	28	—
	GRAND TOTALS	3,615	715	670	—
		54,465	28,057	21,766	2,914

APPENDIX II

Sugar Cane First Year Seedlings—B.49′ Series

List of Crosses and the Number of Seedlings Planted in the Field Nursery (May 1947) and in the First Year Seedling Trial (October—November, 1947)

Cross	Group	No. Planted in the Field Nursery	No. Planted in First Year Seedling Trial
	S. Officinarum x S. spontaneum		
B.3439 x B.37254 ..	3rd Nobilisation Local	108	67
B.44130 x Ba.6032 ..	2nd „ Glagah	223	30
B.3439 x B.(30) L.7 ..	4th „ „	225	64
B.3439 x B.39250 .	2nd „ Dacca	136	80
Ba.11569 x B.45181 ..	Noble x Glagah x Local	334	150
B.35247 x B.3337 ..	Noble x Glagah x Celebes	278	141
B.35197 x B.38279 ..	Noble x Glagah x Local x Celebes ..	390	173
B.35247 x B.38279 ..	„ x „ x „	351	72
	S. Officinarum x S. spontaneum x S. barberi		
B.35207 x B.34104 ..	Noble x Local x Chunnee	904	360
B.3365 x B.34104 ..	„ x „ x „ x „	810	360
B.37161 x B.34104 ..	„ x „ x „ x „	223	130
B.35218 x B.4098 ..	„ x „ x „ x „	179	95
B.40105 x B.37193 ..	„ x „ x „ x „	340	60
B.37161 x B.4098 ...	„ x „ x „ x „	73	66
B.42279 x B.37193 ..	„ x „ x „ x „	200	90
B.4092 x B.37193 ...	„ x „ x „ x „	41	26
B.3439 x Co.290 ..	„ x „ x „ x „	434	160
B.37161 x Co.290 ..	„ x „ x „ x „	230	101
B.34102 x B.37193 ..	Noble x Glagah x Chunnee	530	107
B.37161 x B.3337 ..	„ x „ x „	274	110
B.37266 x B.37193 ..	„ x „ x „	345	120
B.37161 x P.O.J.2878	„ x „ x „	432	160
B.35206 x P.O.J.2878 ..	„ x „ x „	165	55
B.41277 x B.37193 ..	„ x „ x „	290	120
B.3439 x B.37175 ..	„ x „ x „	292	120
B.37161 x B.4327 ..	„ x „ x „ x „ ..	40	26
B.45182 x B.34104 ..	Noble x Glagah x Local x Chunnee ..	225	140
Co.421 x B.45301 ..	„ x „ x „ x „ ..	469	120
Co.421 x B.45237 ..	„ x „ x „ x „ ..	400	120
M.D.47 x B.45105 ..	„ x „ x „ x „ .	125	80
B.38233 x B.34104 ..	„ x „ x „ x „ ..	1,472	480
B.34117 x B.43261 ..	„ x „ x „ x „ ..	260	120
B.38203 x B.34104 ..	„ x „ x „ x „ ..	490	179
B.39211 x B.45304 ..	„ x „ x „ x „ .	46	30
B.35207 x B.40255 ..	„ x „ x „ x „ ..	50	30
B.37266 x B.34104 ..	„ x „ x „ x „ ..	376	120
B.45102 x B.41242 ..	„ x „ x „ x „ ..	203	90
B.35218 x P.O.J. 2878	„ x „ x „ x „ ..	52	30
B.34102 x B.34104 ..	„ x „ x „ x „ ..	213	130
B.34102 x B.4098 ..	„ x „ x „ x „ .	710	205
M.D.47 x B.4098 ..	„ x „ x „ x „	38	30
B.38233 x B.4098 ..	„ x „ x „ x „ ..	25	13
B.38272 x B.4098 ..	„ x „ x „ x „ ...	190	90
B.45121 x B.(30)L7 ..	„ x „ x „ x „ ..	156	81
B.45166 x B.3337 ..	„ x „ x „ x „ .	14	12
B.38203 x B.39156 ..	Noble x Glagah x Celebes x Chunnee	336	119
B.45186 x B.39156 ..	„ x „ x „ x „	33	18
B.35197 x B.45184 ..	„ x „ x „ x „	300	160
B.35247 x B.4306 ..	„ x „ x „ x „	377	120
B.43349 x B.37193 ..	„ x „ x „ x „	160	80
B.35247 x B.45283 ..	„ x „ x „ x „ .	15	12
B.43253 x B.39274 ..	„ x „ x „ x „	448	120
B.37161 x B.43346 ..	„ x „ x „ x „	213	93
B.37161 x B.45314 ..	„ x „ x „ x „	62	44
B.37161 x B.43337 ..	„ x „ x „ x „	11	10

APPENDIX II *(Concluded)*

Cross	Group	No. Planted in Field Nursery	No. Planted in First Year Seedling Trial
B.35197 x B.34104 ..	Noble x Local x Celebes x Chunnee ..	514	204
B.35247 x B.34104 ..	„ x „ x „ x „ ..	1,079	330
B.35247 x Co.281 ..	„ x „ x „ x „ ..	179	86
B.35197 x B.39178 ..	„ x „ x „ x „ ..	230	100
B.37227 x B.4098 ..	„ x „ x „ x „ ..	380	130
B.35197 x B.45236 ..	„ x „ x „ x „ ..	97	60
B.35247 x B.4098 ..	„ x „ x „ x „	146	100
B.43283 x B.41227 ..	„ x „ x „ x „ ..	342	140
B.35247 x B.43214 ..	„ x „ x „ x „ ..	372	150
	S. officinarum x S. spontaneum x S. robustum		
B.4457 x P.O.J.2878 ..	Noble x Glagah x Robustum	68	50
	S. officinarum x S. barberi x S. robustum		
B.37161 x B.4452 ..	Noble x Chunnee x Robustum	13	9
	S. officinarum x S. spontaneum x S. barberi x S. robustum		
B.38233 x 32 M.Q.629	Noble x Glagah x Chunnee x Robustum	60	24
B.4362 x C.P.36-134 ..	„ x „ x „ x „	12	10
B.4457 x B.34104 ..	Noble x Local x Chunnee x Robustum	306	140
B.44233 x B.4098 ..	„ x „ x „	251	90
B.4455 x B.4098 ..	„ x „ x „	210	120
B.35218 x C.P.36-134	„ x „ x „	22	15
B.45223 x B.4098 ..	„ x „ x „	190	90
B.4588 x B.4098 ..	„ x „ x „	106	40
B.45107 x B.40123 ..	„ x „ x „	11	—
C.P.36-158 x B.34104	Noble x Glagah x Local x Chunnee x Robustum	201	100
B.45258 x B.44234 ..	„ x „ x „ x „ ..	21	15
	S. officinarum x S. spontaneum x S. barberi x S. sinense		
B.45117 x B.35269 ..	Noble x Local x Chunnee x Sinense	217	56
B.45316 x B.37261 ..	Noble x Glagah x Local x Chunnee x Sinense	54	30
B.45170 x B.37261 ..	„ x „ x „ x „	66	18
B.40272 x B.34104 ..	„ x „ x „ x „	136	60
B.40272 x B.4098 ..	„ x „ x „ x „	518	174
B.40272 x B.43234 ..	„ x „ x „ x „	24	8
B.40272 x Co.419 ..	„ x „ x „ x „	294	100
B.35218 x B.37261 ..	„ x „ x „ x „	9	7
B.40272 x Co.290 ..	„ x „ x „ x „	116	60
B.35197 x B.4543 ..	Noble x Glagah x Celebes x Chunnee x Sinense	85	25
B.35197 x B.45116 ..	Noble x Galagh x Celebes x Chunnee x Sinense	21	15
B.37226 x B.43290 ..	Noble x Local x Celebes x Chunnee x Sinense	35	20
	S. officinarum x S. spontaneum x S. barberi x S. Robustum x S. sinense		
B.4450 x B.45315 ..	Noble x Local x Chunnee x Robustum x Sinense	14	10
	GRAND TOTALS	21,715	8,505

APPENDIX III

ADVISORY COMMITTEE

FIFTEENTH MEETING — BARBADOS.

November 19, 20, 21 and 22, 1948

The following members of the Committee attended:—

Barbados	Dr. S. J. Saint, C.M.G., O.B.E., Director of Agriculture, (Chairman).
Imperial College of Tropical Agriculture	Mr. H. J. Page, O.B.E., Principal.
British Guiana	Mr. H. H. Croucher, Director of Agriculture.
Jamaica	Mr. E. B. Martyn, Plant Pathologist.
Leeward Islands	Mr. R. B. Allnutt, Director of Agriculture.
Trinidad	Dr. E. Phillis, Chief Scientific Officer.
Windward Islands	Mr. C. C. Skeete, Director of Agriculture.

The following persons also attended the meetings and took part in the discussions :

Mr. E. S. Robinson	Chairman, Barbados Sugar Producers' Association, and representative of the British West Indies Sugar Association.
Mr. J. C. Hotchkiss	Assistant Adviser on Agricultural Education to the Development and Welfare Organisation, British West Indies.
Mr. M. Halcrow, O.B.E. ..	Deputy Director of Agriculture, Barbados.
Mr. B. deL. Inniss	Botanist, British West Indies Central Sugar Cane Breeding Station.

MEETINGS

Friday, November 19 ..	Morning.	Meeting of Committee.
	Afternoon.	Meeting of Committee.
Saturday, „ 20 ..	Morning.	Meeting of Committee.
	Afternoon.	Visit to Codrington Experimental Station and to the Central Livestock Station.
Sunday, „ 21 ..	Afternoon.	Inspection of newer varieties growing under commercial cultivation.
Monday, „ 22 ..	Morning.	Meeting of Committee.
	Afternoon.	Visit to Groves to inspect cane breeding work.

PROCEEDINGS OF THE COMMITTEE

The proceedings of the Advisory Committee were as follows:—

PROGRESS REPORT ON THE WORK OF THE STATION

221. The Botanist submitted a progress report on the work of the Station for the period 1st October, 1947, to the 30th of September, 1948, together with a breeding programme for 1948. The Committee noted that most of the crosses now being made represented the mixing of several of the wild forms of **Saccharum** with **Saccharum officinarum.** Many of these crosses were yielding a high percentage of good seedlings so that the number of further experimental crosses has now to be limited in order to explore fully the possibilities of the proven crosses.

222. The Committee expressed its satisfaction that good progress was being maintained.

PERFORMANCE OF SEEDLINGS IN CONTRIBUTING COLONIES

223. The Botanist submitted a summary of the reports which had been submitted to the Station on the field performances of the newer seedling canes in the Colonies of Barbados, St. Kitts, Antigua, British Guiana, Trinidad and Jamaica.

224. The Committee noted that the variety B.43391 which was the most promising of the B.43' varieties under Barbados conditions had recently been found in the multiplication plots at Codrington Experimental Station and elsewhere in Barbados to be exhibiting symptoms suggestive of mosaic disease. All of these canes at Codrington Experimental Station had been destroyed immediately and tests were being made to determine whether these symptoms are due to virus infection. This variety was despatched in 1945 to all contributing colonies through the Plant Quarantine Station at Trinidad.

225. The Committee inspected the variety B.43391 at Constant plantation where the symptoms referred to were in evidence. The members of the Committee who have had experience of mosaic disease expressed the opinion that these symptoms were not, in fact, those of mosaic.

DESPATCH OF SEEDLINGS TO CONTRIBUTING COLONIES

226. The Botanist presented to the Committee a list of the B.45' series of seedlings which had been despatched to contributing colonies in accordance with the decisions reached at the last meeting and recorded in Minute No. 199.

227. In view of the findings recorded in Minute No. 224, the Committee again considered the possible risk of introducing mosaic disease into British Guiana and the Windward and Leeward Islands in planting material sent from Barbados. The Committee decided that, if the tests referred to proved positive, the position would have to be re-considered.

TESTING OF VARIETIES IN CONTRIBUTING COLONIES

228. The Committee is of the opinion that the commercial possibilities of the new seedling canes which are being produced by the Station are not being sufficiently tested in some of the contributing colonies. The Committee considers that the testing of varieties is as important as their production, both for the proper functioning of the Station and for the interests of the sugar industry, and accordingly recommends that an adequate organisation should be maintained for this purpose.

229. The Committee asked the Chairman to collect from the various contributing colonies details of the methods which are now in use for the testing of, and reporting on, varieties and to submit for consideration at the next meeting proposals for the standardisation of this work.

PLANT QUARANTINE STATION

230. The Committee again discussed the present unsatisfactory conditions of quarantine in the British West Indies and the urgent necessity for the erection of a new quarantine house at the Imperial College of Tropical Agriculture to enable the introduction of further cane breeding material for the use of the Cane Breeding Station.

231. The Chairman was requested to communicate with the Chairman of the Plant Quarantine Committee and endeavour to expedite action on this matter.

VARIETAL RESISTANCE TO FROGHOPPER

232. Dr. Phillis informed the Committee that the Director wished the Entomologist of his Department to carry out experimental work to study the varietal resistance to froghopper.

233. The Committee referred to Minutes 127—130 where the decisions arising out of previous discussions on this matter are recorded and re-affirmed these decisions. The Committee noted that froghopper was becoming increasingly prevalent in British Guiana so that these investigations are now of even greater importance.

THE EXPORT OF VARIETIES TO FOREIGN COUNTRIES

234. The Chairman asked the Committee to review previous decisions on this matter as recorded in Minutes No. 104, 105, 162, 163, 186, 187, 206 and 207 in view of the facts that:—

(a) Martinique, Guadeloupe, Venezuela and the Dominican Republic were now subscribing members of the Station;

(b) a request had been received from Dr. E. W. Brandes, of the U.S. Bureau of Sugar Cane Investigations, for a clarification of the present policy; and

(c) during recent months, applications for Barbados varieties had been received from Hawaii, Argentine, Brazil, Mexico, India and Pakistan.

235. After a full discussion, the Committee decided that planting material of Barbados varieties could be released to foreign countries outside the Caribbean area on the following conditions:—

(a) the request was made through the Chairman of the Advisory Committee;

(b) the varieties had been reaped as first year seedlings at least ten years previously.

236. With regard to countries within the Caribbean area, it was decided that there should be no alteration in the present rulings.

THE APPOINTMENT OF A CYTO-GENETICIST

237. The Chairman informed the Committee that, in accordance with the decision recorded at Minute No. 210, an application had been submitted to the Secretary of State for a Colonial Development and Welfare Research grant in favour of the Government of Barbados to provide for a programme of cyto-genetical research on sugar cane in the West Indies. The Secretary of State has recently informed the Governments of the contributing colonies that a free grant of £18,000 had been made available for this purpose and that steps were being taken to advertise the post of Cyto-Geneticist.

238. The Chairman informed the Committee that he understood Mr. G. C. Stevenson, at present Chief Research Officer in the Department of Agriculture, British Guiana, was making application for this post. The Committee is aware that experienced cyto-geneticists are most difficult to obtain at the present time and, in view of Mr. Stevenson's record and experience, considered that his application should be given favourable consideration.

239. The Chairman was asked to have these views of the Committee conveyed to the Secretary of State since it was considered most desirable that this scheme should be implemented as soon as possible.

FINANCE

240. The Chairman informed the Committee that, in accordance with the recommendations contained in Minute No. 216, the Colonies of Jamaica, Leeward Islands, Windward Islands and Trinidad had agreed to increase their contributions to the expenses of the Station. In view of the difficulty of administering a grant calculated on a fluctuating basis, the Committee recommended that the following annual contributions should be requested:—

	£
British Guiana	2,400
Jamaica	2,400
Leeward Islands	770
Trinidad	2,000
Windward Islands	135
Total	7,705

This recommendation would mean that the contributing colonies would bear approximately one-half of the total cost of cane breeding and would require the colonies of British Guiana and of Trinidad to increase their annual subscriptions subsequent to 1947—48 by £1,200 and £700 respectively.

241. The Committee considered the appended financial statement and approved the estimated expenditure for the financial year 1948-49 :

FINANCIAL STATEMENT

ITEM	Voted 1947-48	Actual Expenditure	Estimates 1948-49	Estimated Expenditure on Cane breeding by the B'dos Government 1948-49	Estimated Total Expenditure on cane breeding 1948-49
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Personal Emoluments:					
Chairman	100 0 0	100 0 0	100 0 0		
Botanist	625 0 0	625 0 0	650 0 0		
Cost of Living Allowance ..	140 0 0	140 0 0	140 0 0		
Two Agric. Assistants	508 10 0	508 6 8	533 10 0		
Cost of Living Allowance ..	168 10 0	167 11 0	173 10 0		
Two part-time Agric. Assts. ..	125 0 0	125 0 0	125 0 0		
Cost of Living Allowance ..	52 0 0	52 0 0	25 10 0		
Clerical Assistance..	50 0 0	50 0 0	50 0 0		
Cost of Living Allowance ..	13 0 0	12 12 6	6 10 0		
Statistical Clerk ..	172 0 0	171 17 6	184 10 0		
Cost of Living Allowance ..	62 0 0	61 11 3	65 10 0		
Steno-Typist ..			200 0 0		
Consolidation of salaries of permanent staff in accordance with recommendation of Mr. Adams Commission.. ..			100 0 0		
	2,016 0 0	2,013 18 11	2,354 0 0	2,753 0 0	5,107 0 0
Provident Fund ..	150 0 0	80 0 0	200 0 0		200 0 0
Seedling Trials ..	2,850 0 0	2,382 14 1	3,350 0 0	3,364 0 0	6,714 0 0
Stationery and Library	200 0 0	91 18 4	200 0 0	65 0 0	265 0 0
Travelling	550 0 0	242 11 7	550 0 0	885 0 0	1,435 0 0
Incidentals	35 0 0	34 0 3	100 0 0	140 0 0	240 0 0
Capital..	1,000 0 0	811 0 7	750 0 0		750 0 0
	6,801 0 0	5,656 3 9	7,504 0 0	7,207 0 0	14,711 0 0

REVENUE FROM CONTRIBUTING COLONIES FOR FINANCIAL YEAR 1948—49.

COLONY	Revenue 1947-48			Proposed Revenue 1948-49		
	£	s.	d.	£	s.	d.
British Guiana	1,200	0	0	2,400	0	0
Jamaica	2,409	19	2	2,400	0	0
Leeward Islands	772	2	9	770	0	0
Trinidad	1,301	1	0	2,000	0	0
Windward Islands	135	0	0	135	0	0
				7,705	0	0
	Savings at 30/9/47 ..			794	9	10
	Estimated income 1948-49 ..			8,499	9	10

RESERVE FUND (MINUTE NO. 218)

CONTRIBUTIONS FROM FOREIGN COUNTRIES 1947—48

Martinique	£ 198	19	2
Dominican Republic	994	15	10
Cayenne	20	14	7
	£1,214	9	7

Subscriptions from Venezuela and Guadeloupe have not yet been received.